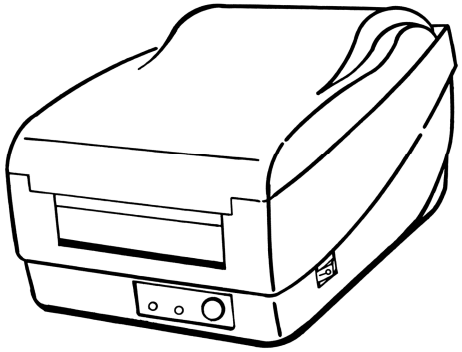
OS Series

Desktop Barcode Printer



User's Manual

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into a different outlet on a different circuit.
- Consult the dealer or an experience Radio/TV technician for help.

This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance. The user is cautioned that any changes or modifications not expressly approved by Argox Information Co., Ltd. could void the user's authority to operate the equipment.

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A Letter to Our Customers

Dear Customers,

Congratulation on selecting an Argox OS series printer! We believe soon you will find that you have made a cleverest choice!

This booklet is a small gift from us. It is intended for helping you to know your printer better, then further to optimize it. Basically, this booklet contains two parts: operation guidance and related valuable information.

In the part of the operation guidance, we will furnish you with a lot of complementary illustrations, so you may pick up those operation guides more quickly.

In the latter chapters of Trouble Shooting, Maintenance as well as Reference Technical information, which we think, you may need them just in case. Therefore, for your quick reference, we try to table them as much as possible.

Enjoy your reading and have a good time with your printer!

Best wishes,
***Argox Information Co., Ltd**.*

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Getting Started

Congratulations on choosing the Argox OS Series desktop barcode printer. This manual will help you get to know your new printer. There are two parts to this manual, an operation guide and related information. The operation guide is illustrated to help you quickly become familiar with the printer. The related information includes troubleshooting, maintenance and technical information for your reference.

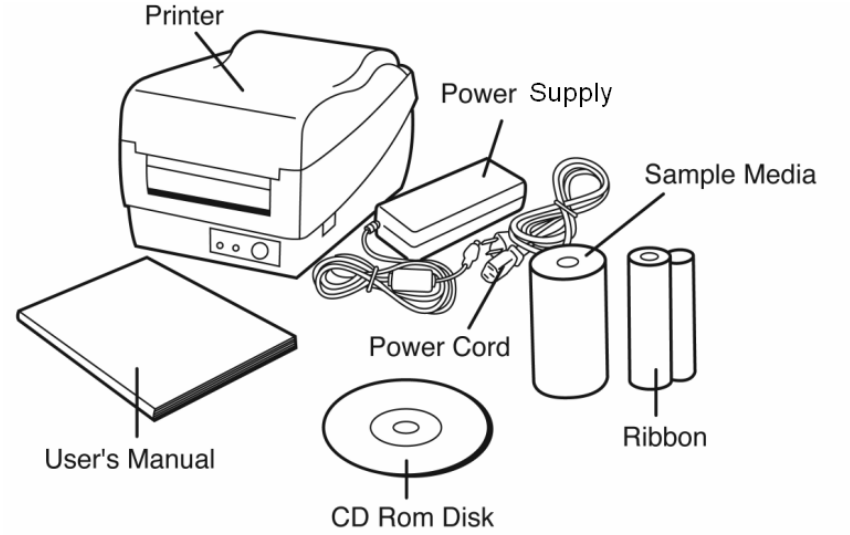
Unpacking

After receiving your printer, please check for possible shipping damage:

1. Inspect the outside of both the box and the printer for possible damage.
2. Open the top cover of the printer to see if the media compartments are in order.

Note: *If damage has occurred, contact your shipping company immediately to file a claim.*

3. Check whether you have received the following accessories together with the printer. If there are any items missing, please contact your local dealer.



Package Contents

- Printer
- Power Supply
- Power Cord
- User's Manual
- CD Rom Disk
- Ribbon (not included with OS-203 or OS-204)
- Sample Media (not included with OS-203 or OS-204)

Note: *The ribbon and sample media are not included with the OS-203 or OS-204 models.*

Connecting the Power Supply

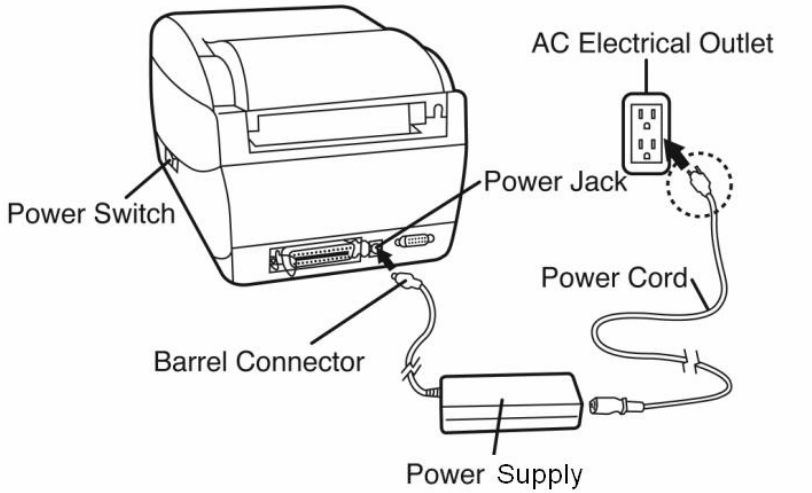
Connect the power supply as below.

WARNING:

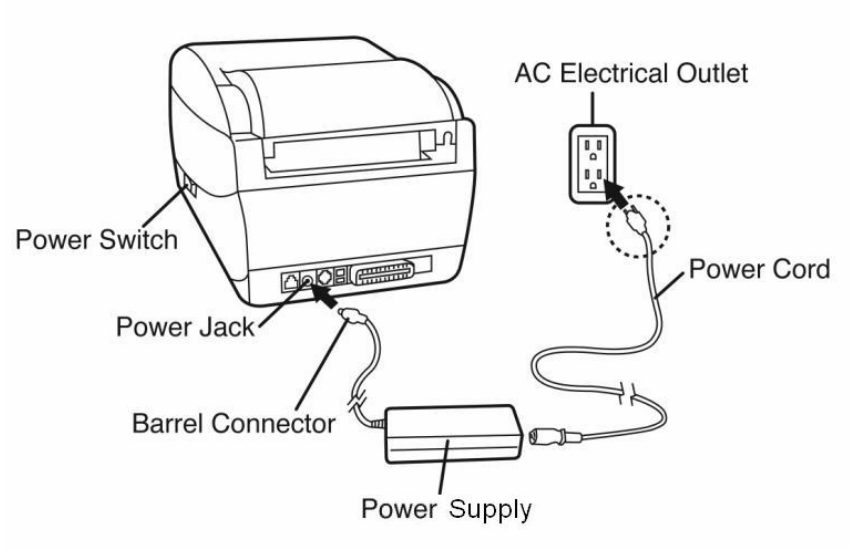
- *Do not operate the printer and power supply in an area where they can get wet.*

Make sure the power switch is in the "O" position, and be careful not to touch the 36-pin parallel connector.

1. Insert the barrel connector of the Power Supply into the power jack on the back of the printer. Note the location of the power jack for different models in the diagrams below.
2. Insert the separate power cord into the power supply.
3. Plug the other end of the cord into an AC electrical outlet.



OS-204 / 214 / 214Zip / 314

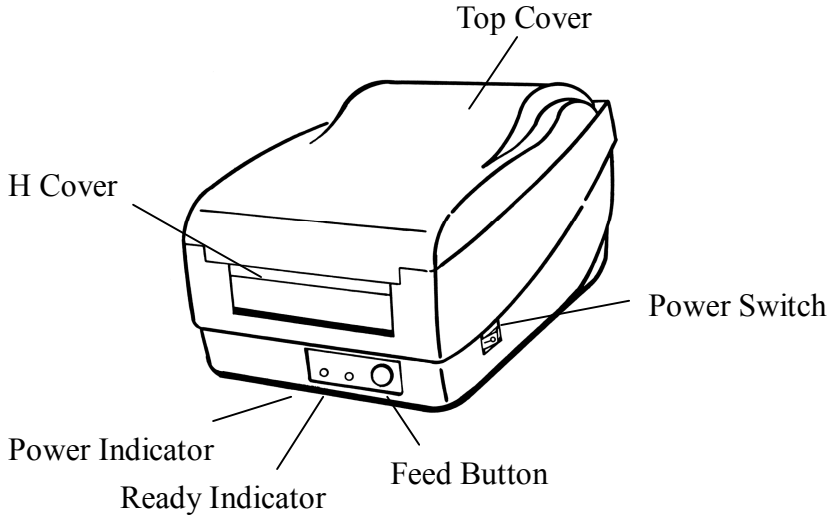


OS-203 Model

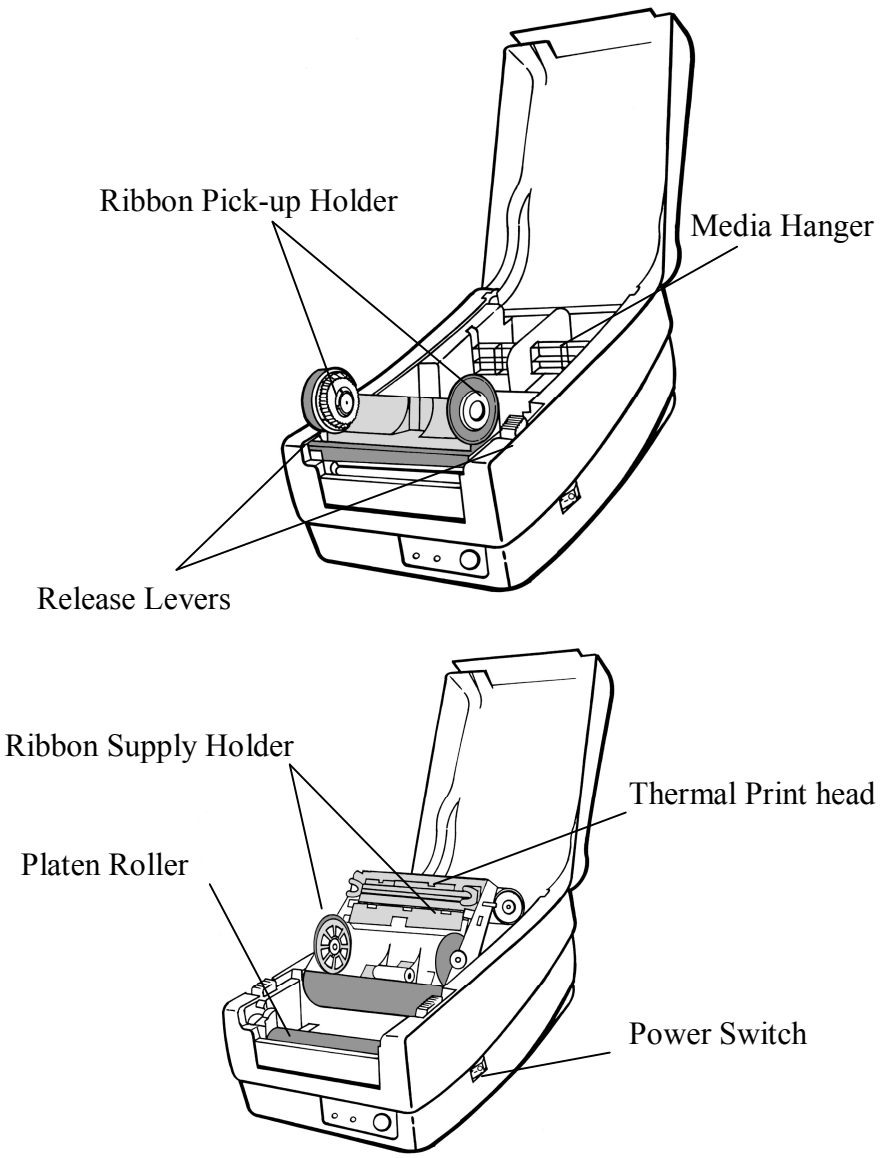
Getting to Know Your Printer

There are five models in the OS Series. The OS-214, OS-214Zip and OS-314 share the same parts and features, as do the OS-203 and OS-204. Parts and features of the OS series are illustrated below.

Parts and Features (OS-214, OS-214Zip, OS-314)

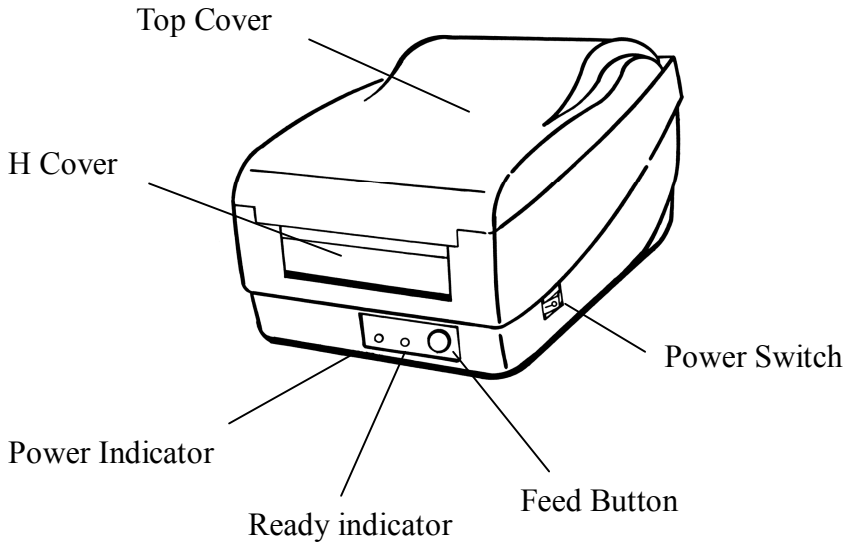


OS-214 / OS-214Zip / OS-314 Models

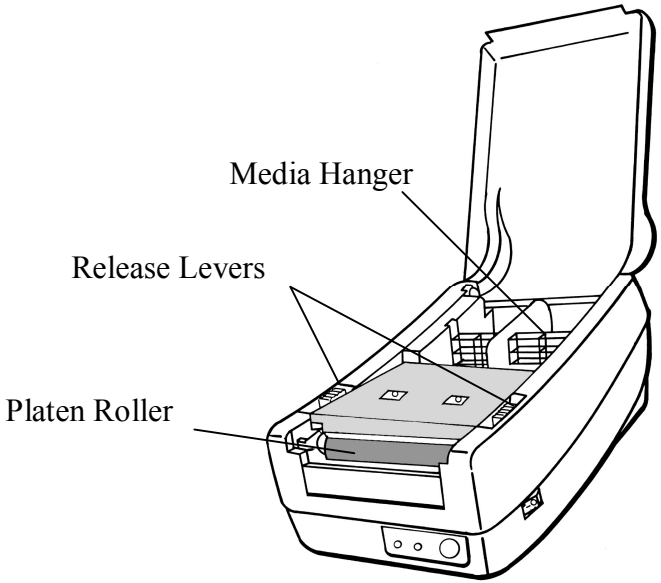


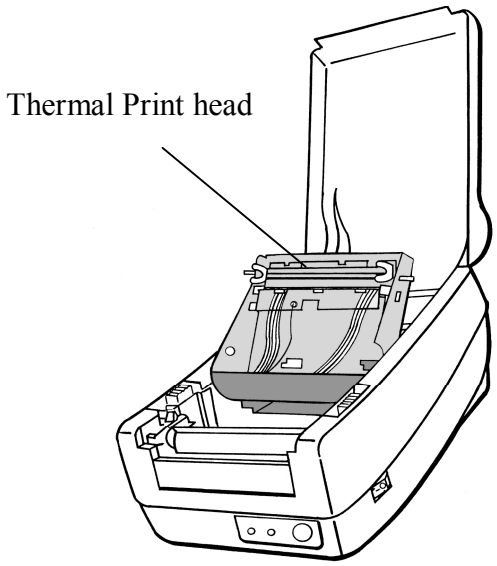
OS-214 / OS-214Zip / OS-314 Models

Parts and Features (OS-203, OS-204)



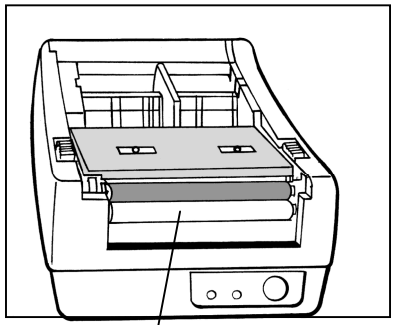
OS-203 / OS-204 Models



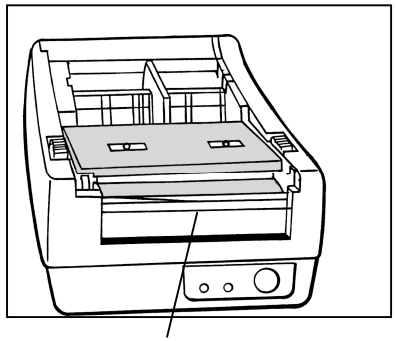


OS-203 / OS-204 Models

Peel-Off Option



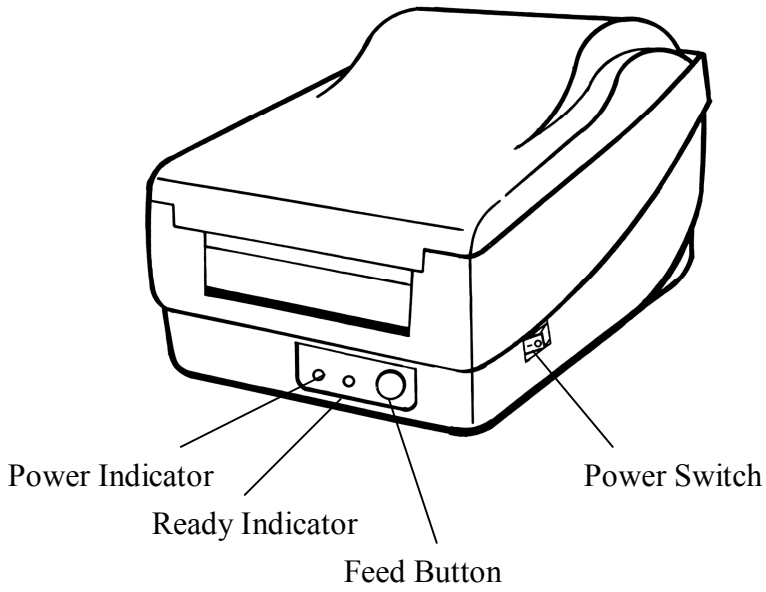
Cutter Option



OS-203 / OS-204 Models

Controls and Indicators

The printer's controls and indicators are shown in the diagram below. The following table explains control and indicator functions.



Control / Indicator	Function
Power Switch	• On: power on • Off: shut down ***Note:*** *Turn power off before connecting or disconnecting cables*
Power Indicator	• Green light shows the power-on status • Light off shows the power-off status • Blinking light indicates error has occurred
Ready Indicator	• Green shows printer is ready to operate • Blinking light indicates printer is paused
Feed Button	• Press to advance labels to the first printing position • Press to leave "pause" status • Press to back feed if a label is not properly aligned (for OS-203 Peel-Off mode only) • Press and hold while turning on the power to print out a configuration profile

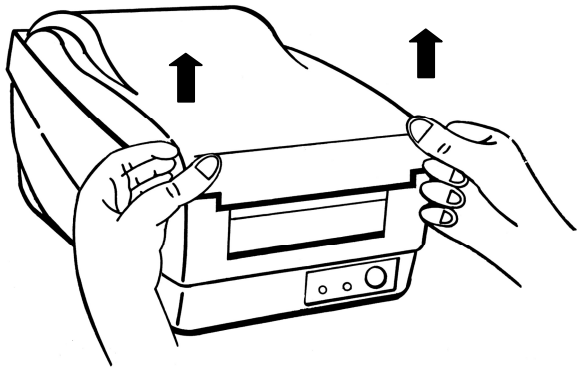
Loading Ribbon and Media

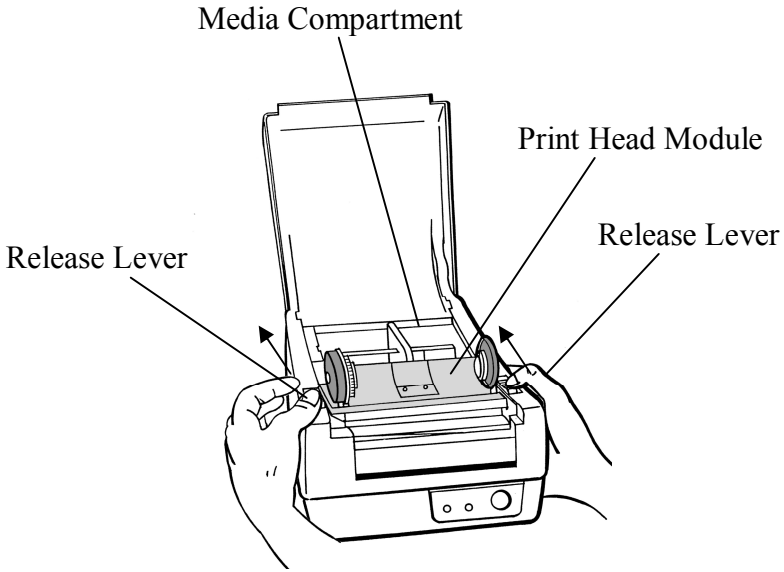
This section describes how to load ribbon and media into the OS Series printers.

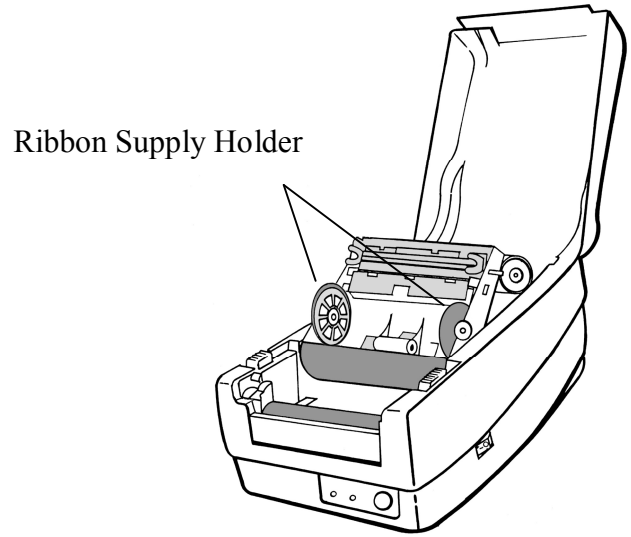
Loading a Ribbon (OS-214, OS-214Zip, OS-314)

Note: *This section does not apply to direct thermal printing.*

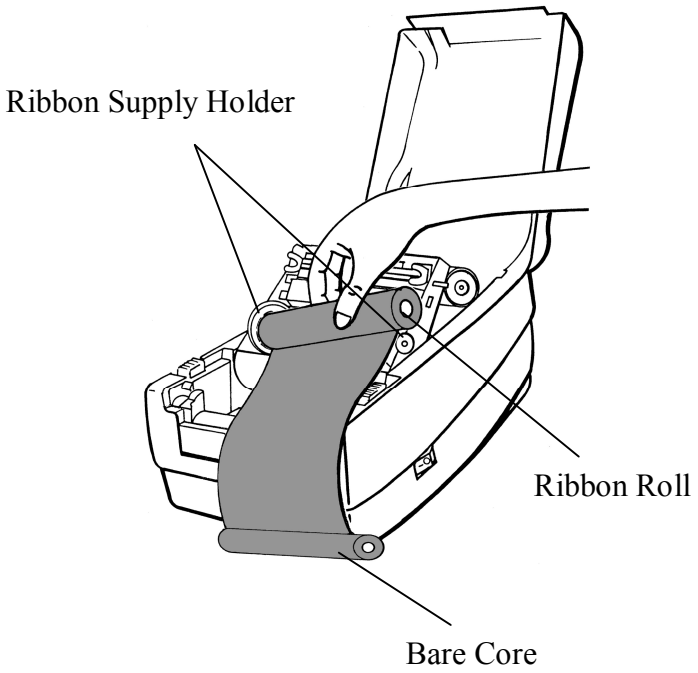
1. Lift the top cover to expose the media compartment.
2. Unlatch the print head module by pushing the two white release levers on the sides toward the rear.
3. Turn over the print head module to expose the ribbon supply holder.



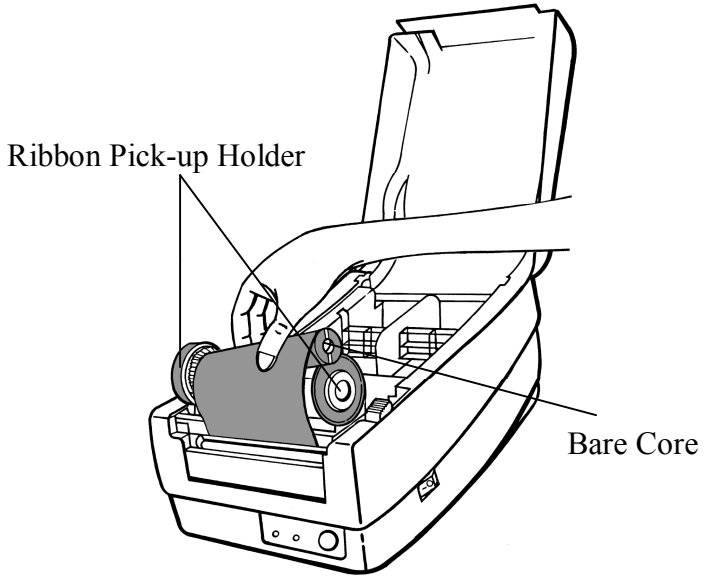




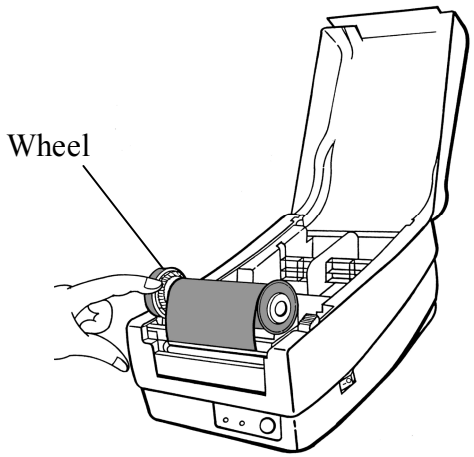
4. Unwrap the ribbon roll pack and separate the ribbon roll and the bare core.
5. Attach the edge of the ribbon on the bare core and wind it a little bit onto the core.
6. Insert the ribbon roll into the supply holder. (First snap in the left side and then the right side.)

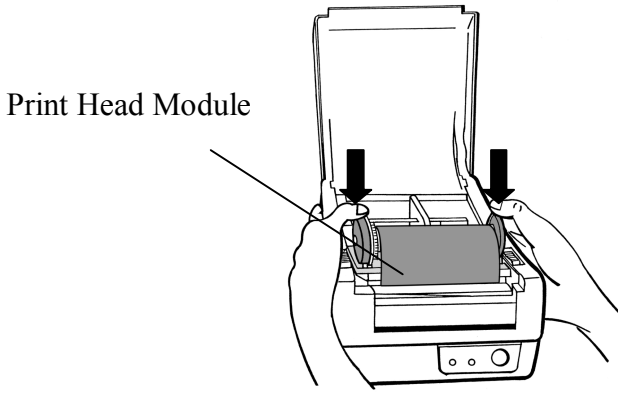


7. Put the print head module down and insert the bare core into the pick-up holder. (First snap in the left side, and then the right side.)



8. Turn the wheel of the print head module to ensure the ribbon is tightly wound.
9. Press down the print head module firmly until you hear a snap.





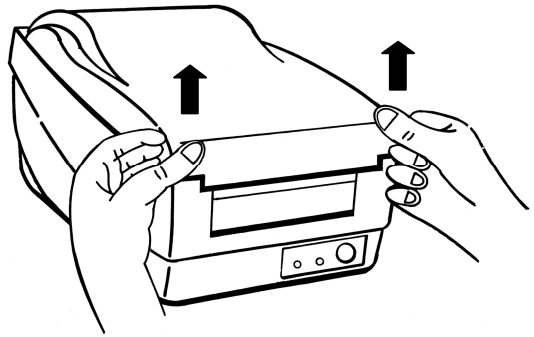
Loading Media

The OS Series printers offer three different loading modes: standard, peel-off, or cutting.

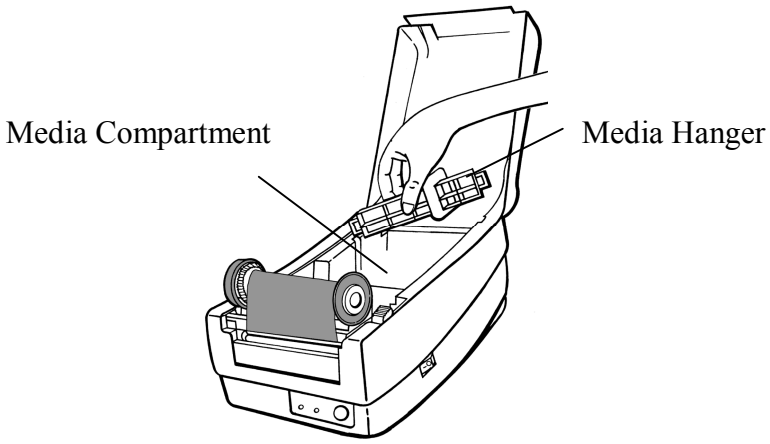
- **Standard mode** allows you to collect each label freely.
- **Peel-off mode** peels backing material away from the label as it prints. After a label is removed, the next label prints.
- **Cutting mode** automatically cuts the label after it prints.

Standard Mode

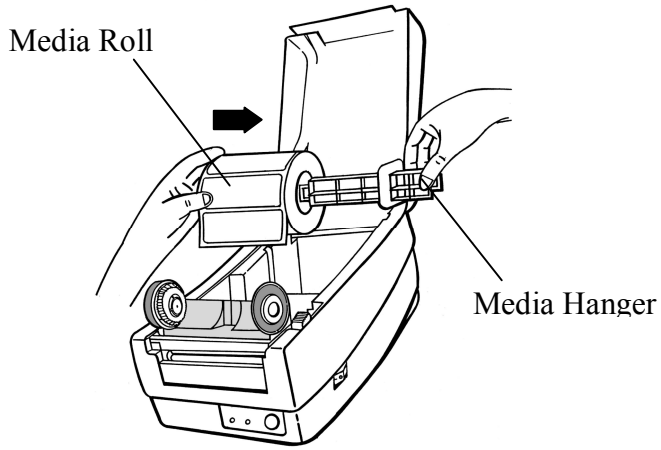
1. Lift the top cover to expose the media compartment.



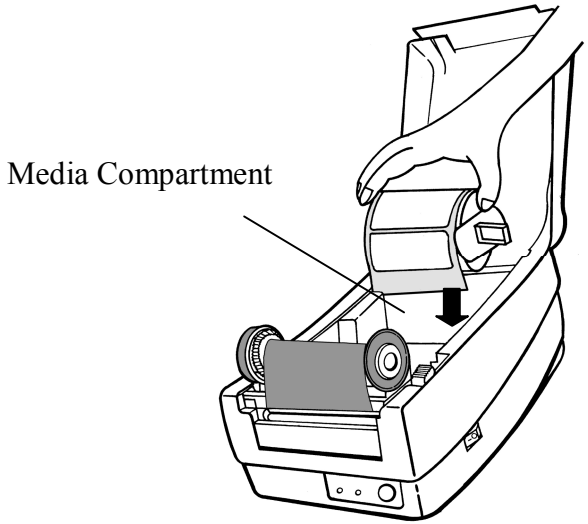
2. Remove the media hanger.

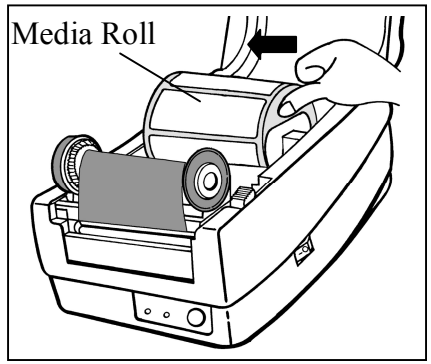


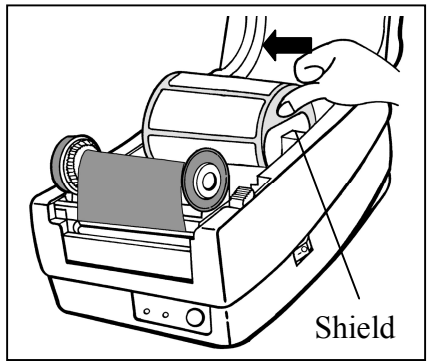
3. Load the media roll onto the hanger from left to right.



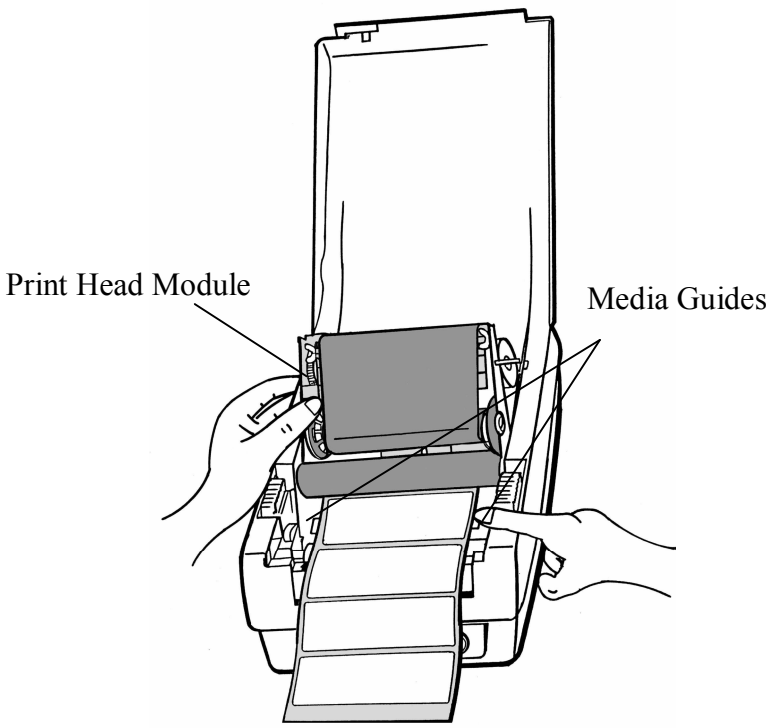
4. Click the media hanger back into the media compartment.
5. Align the media roll to the left end.
6. Move the shield from right to left until it leans against the media.



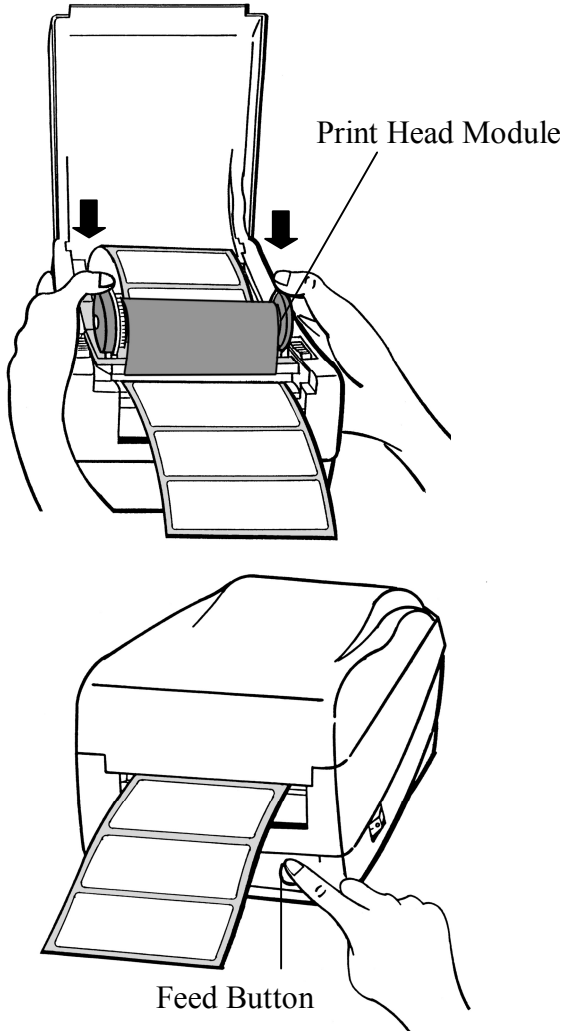




7. Unlatch the print head module.
8. Hold the print head module upright with one hand to allow the media to pass under it. Lead the media through the media guides with the other hand.
9. Lead the media over the platen roller.



10. Put the print head module down and press down firmly until you hear a snap.
11. Close the top cover and turn on the printer or press the "FEED" button if the printer is already on.

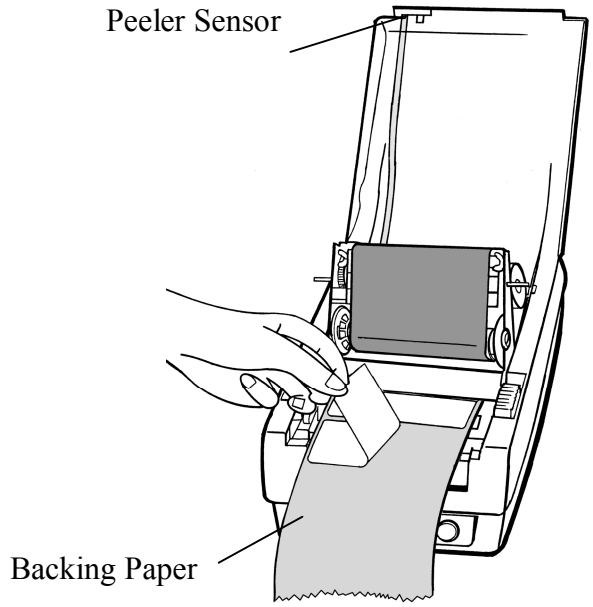


Peel Off Mode

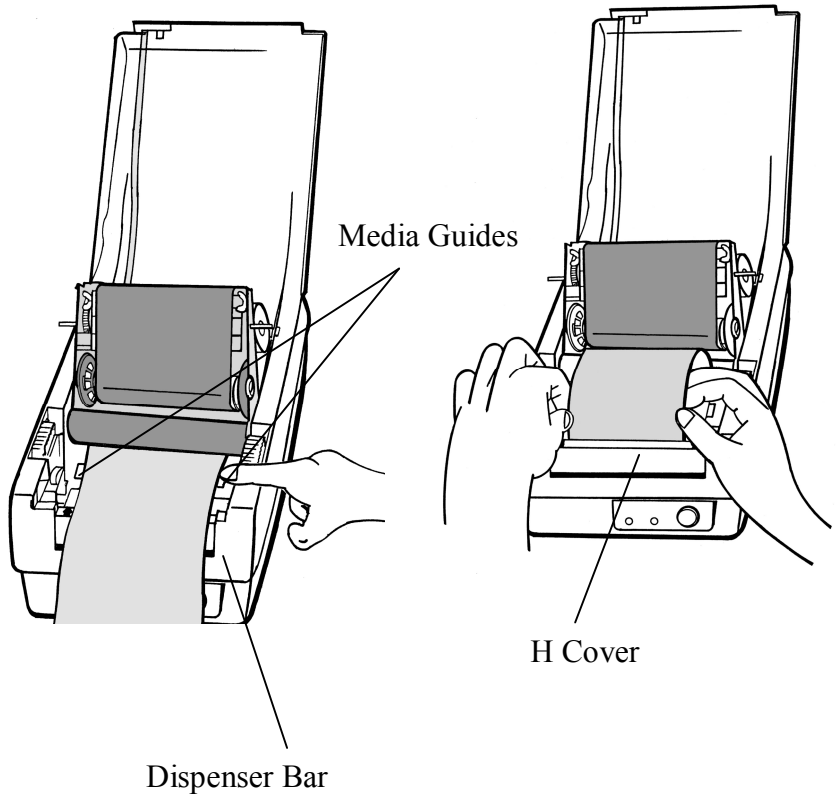
Note: *For Peel-off mode you must first install the dispenser kit. Please refer to Appendix I.*

Follow Steps 1 to 8 listed in Standard Mode above.

9. Remove enough labels to expose approximately a 6" length of backing paper.



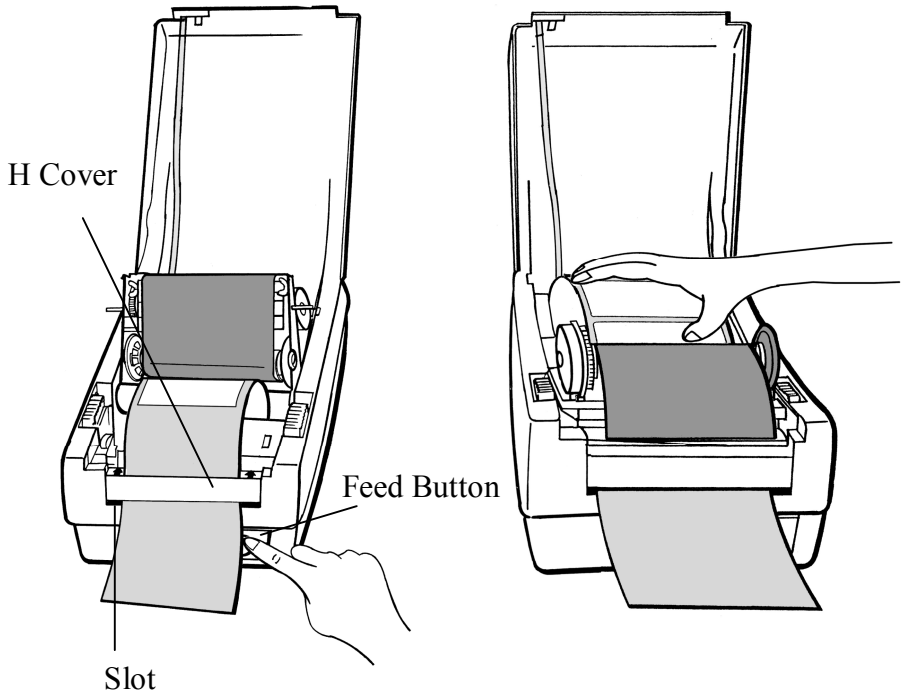
10. Trim the front edge of the label backing paper with scissors or a knife.
11. Lead the backing paper into the slot between the dispenser bar and H cover, then ensure it is inserted between the white plastic roller and platen roller.



12. Press the "FEED" button for the label backing paper to

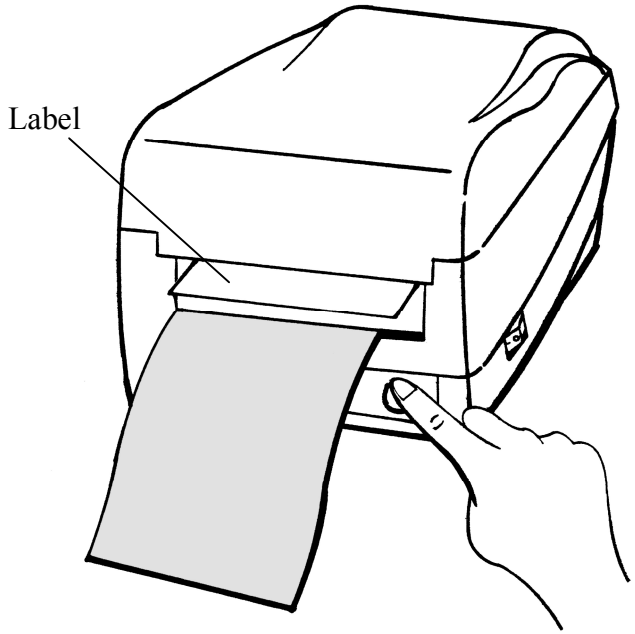
come out from the slot under the H cover.

13. In OS-203 Peel-off mode, if a misaligned loading occurs keep pressing the "FEED" button to back-feed and reload the label stock.
14. To remove any slack, rewind the media onto the roll. Press down the print head module firmly.



15. Close the top cover and turn on the printer or press the "FEED" button if the printer is already on.

Note: *The "FEED" button does not make the printer peel. Peeling occurs only when the software is properly set.*

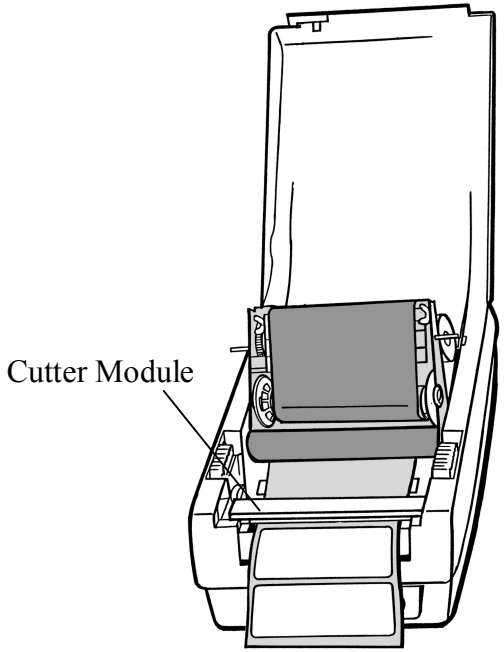


Cutting Mode

Note: *For Cutting mode you must first install the cutter. Please refer to Appendix II.*

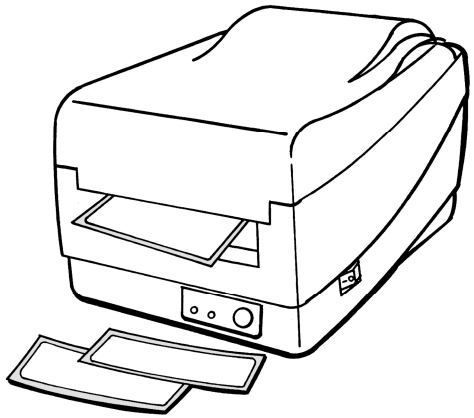
Follow Steps 1 to 8 listed in Standard Mode above.

9. Thread the media over the platen roller, then route the media through the slot of the cutter module.
10. Press down the print head module firmly.



11. Close the top cover and turn on the printer or press the "FEED" button if the printer is already on.

Note: *The "FEED" button does not make the printer cut. Cutting occurs only when the software is properly set.*



Calibration and Configuration

This section discusses calibration, printing configuration and resetting the printer to factory defaults.

Performing Calibration and Configuration

1. Turn off the printer power.
2. Press and hold the feed button while turning on the power, then the printer will execute calibration to let machine automatically stock length of the label. (Please continuous to press the feed button when machine executes calibration.)
3. Please continuous pressing the feed button until the printing motor is activated, then printer will execute configuration, and printing the configuration profile. The profile includes firmware version, ROM checksum, RS232, thermal transfer /direct thermal settings, hardware configuration, and font types.
4. After calibration and configuration, at PPLB emulation, the printer enters character dump mode. To exit from dump mode, press the feed button again. (If you accidentally print the label without exiting from dump mode in advance, you need to turn on the printer again to print normally.)

Resetting to Factory Default Settings

1. Turn on the printer and wait for 5 or more seconds.
2. Press the "Feed" button for 10 seconds, and the "Ready" indicator and "Power" indicator will go off in order.
3. When the two indicators relight, release the feed button.
4. The printer feeds approximately 3 ~5 blank labels, and then resets to the factory defaults.

Note: Revise the factory default settings that stored in flash, even if turn off the power source cannot be eliminated.

Computer Connections

Note: *You must insert the power supply's barrel connector into the power jack on the back of the printer before connecting communication cables.*

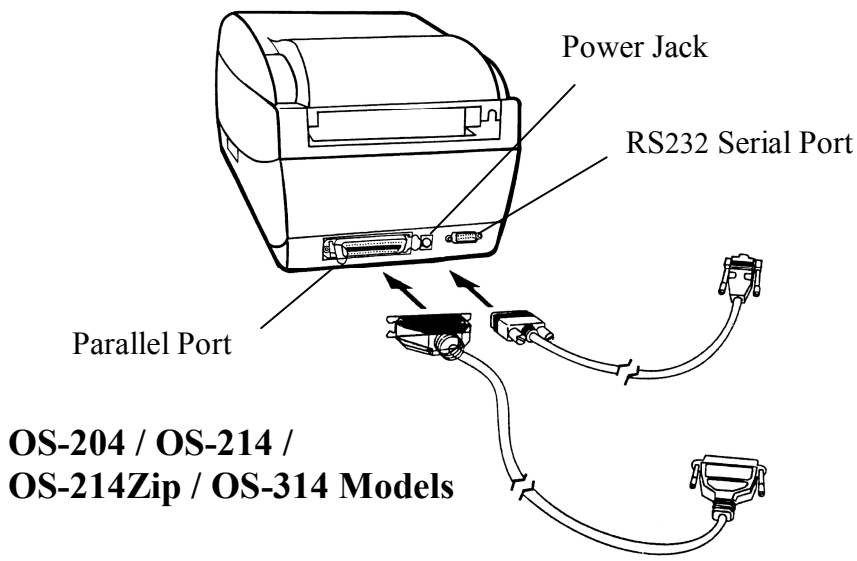
This printer comes with both a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface (for OS-203, it is six-pin) and a standard Centronics parallel interface. In either case, you must supply the required interface cable for your application.

Note: *This printer complies with FCC Rules and Regulations, Part 15, for Class B Equipment, for use with fully shielded six-foot data cables. Use of longer cables or unshielded cables may increase radiated emissions above Class B limits.*

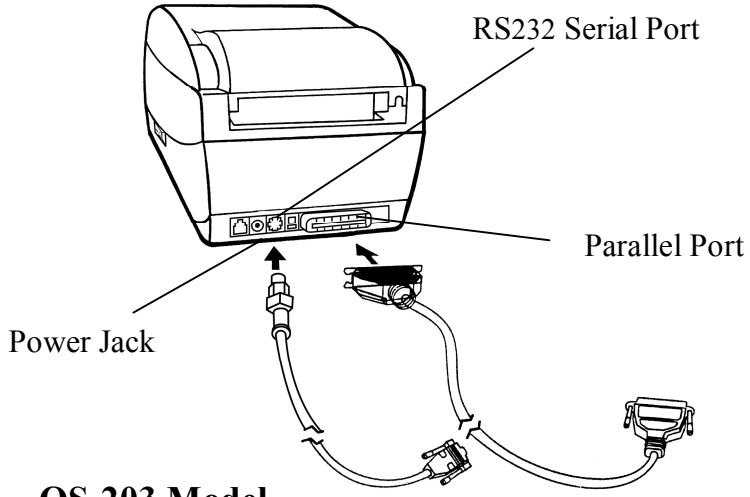
Serial (RS-232) Interface Requirements

The required cable must have a nine-pin "D" type (for the OS-203, six-pin) male connector on one end, which is plugged into the mating serial port located on the back of the printer. The other end of the signal interface cable connects to a serial port on the host computer.

For technical and pin-out information, please refer to the Reference Technical Information, Interface Specification.



OS-204 / OS-214 / OS-214Zip / OS-314 Models



OS-203 Model

Parallel Interface Requirements

The required cable (IEEE 1284-compliant is recommended) must have a standard 36-pin parallel connector on one end, which is plugged into the parallel port located on the back of the printer. The other end of the parallel interface cable connects to the printer connector at the host computer. For pin-out information, refer to the Reference Technical Information, Interface Specification.

Serial and Parallel Cabling Requirements

Data cables must be of fully shielded construction and fitted with metal or metalized connector shells. Shielded cables and connectors are required to prevent radiation and reception of electrical noise.

To minimize electrical noise pickup in the cable:

- Keep data cables as short as possible (6 ft or 1.83m recommended).
- Do not tightly bundle the data cables with power cords.
- Do not tie the data cables to power wire conduits.

Notes:

1. *Centronics allows a much higher communication speed than serial.*
2. *The printer automatically detects parallel or serial port. No need to set a switch or send a command.*
3. *Default settings are included in the configuration report.*

Communicating with the Printer

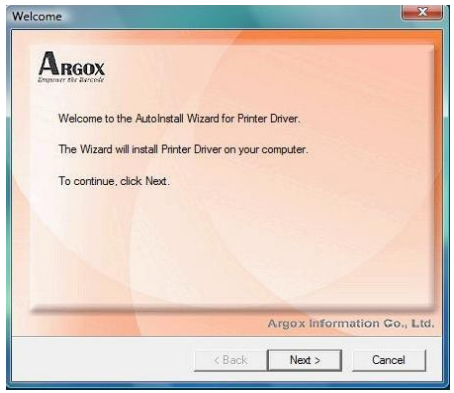
The bundled printer driver can be applied to all applications under Windows 98/2000/2003/Windows XP and Windows Vista. With this driver you can run any popular Windows software applications such as MS-Word and print out to this printer.

Before installation

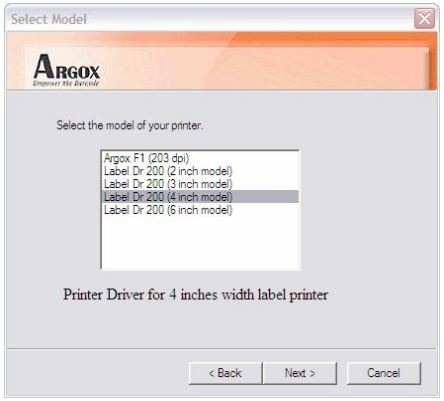
1. Check the contents of the driver to ensure it is complete.
2. Make a backup copy of this driver.

Installing the Printer Driver (Label Dr.200 or Label Dr. 300)

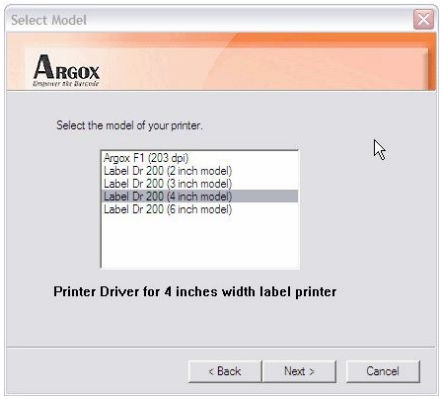
1. Double click the driver file (Label Dr. 200 or Label Dr. 300) to execute in Windows.
2. Click "Next".


Welcome
ARGOX
Welcome to the AutoInstall Wizard for Printer Driver.
The Wizard will install Printer Driver on your computer.
To continue, click Next.
Argox Information Co., Ltd.
< Back
Next >
Cancel

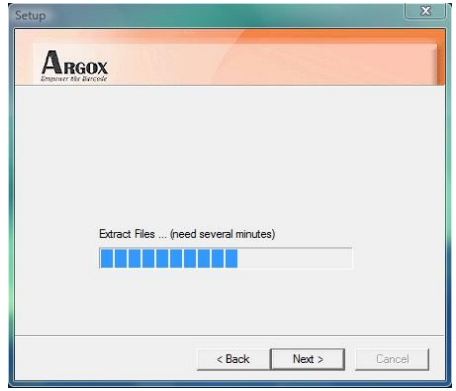
3. Select a driver for your printer and click "Next". For 203 dpi modes with 4 inches print width, you should select Label Dr. 200 (4 inch model).


Select Model
ARGOX
Select the model of your printer.
Argox F1 (203 dpi)
Label Dr 200 (2 inch model)
Label Dr 200 (3 inch model)
Label Dr 200 (4 inch model)
Label Dr 200 (6 inch model)
Printer Driver for 4 inches width label printer
< Back
Next >
Cancel

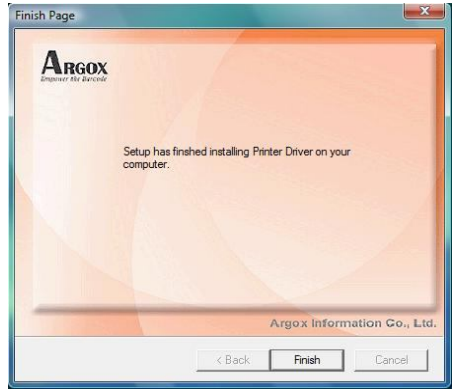
4. Select the port of the printer and click "Next".


Select Model
ARGOX
Select the model of your printer.
Argox F1 (203 dpi)
Label Dr 200 (2 inch model)
Label Dr 200 (3 inch model)
Label Dr 200 (4 inch model)
Label Dr 200 (6 inch model)
Printer Driver for 4 inches width label printer
< Back
Next >
Cancel

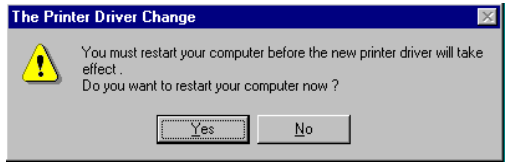
5. After the related files have been copied to your system, click “Next”.



6. After the installation is complete, click “Finish”.



7. Click “ Yes”.


The Printer Driver Change
You must restart your computer before the new printer driver will take effect .
Do you want to restart your computer now ?
Yes
No

Installing the Printer Driver (Seagull Driver)

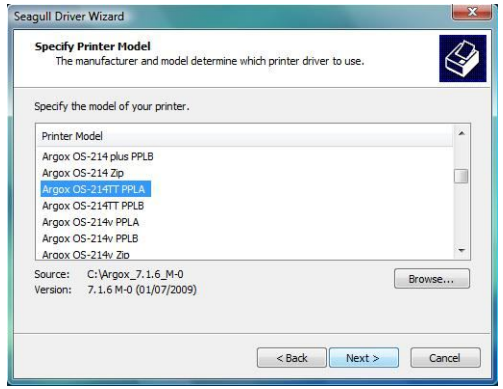
1. Double click the driver file to execute in Windows.
2. Click "Next".

Windows Printer Drivers
License Agreement
SEAGULL SCIENTIFIC
Please read the following license agreement carefully.
WINDOWS PRINTER DRIVER
LICENSE AND LIMITED WARRANTY
Seagull Scientific, Inc. ("Seagull") grants you a non-exclusive license to use the accompanying Windows Printer Driver(s) and related documentation ("Seagull Software"), subject to the following provisions. You assume full responsibility for the selection of the Seagull Software to achieve your intended results, and for the installation, use, and results obtained from the Seagull Software.
Both the software and the related material are Copyrighted and are protected by law. Title to and all rights and interests in the Seagull Software, wherever resident and on
I accept the terms in the license agreement
I do not accept the terms in the license agreement
< Back
Next >
Cancel

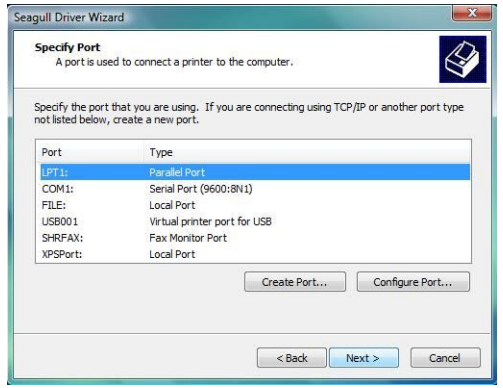
3. Select ”Install printer drivers”and click “Next”.

Seagull Driver Wizard
Welcome to the Seagull Driver Wizard
This wizard helps you install and remove printer drivers.
What would you like to do?
Install printer drivers
Upgrade printer drivers
Remove printer drivers
< Back
Next >
Cancel

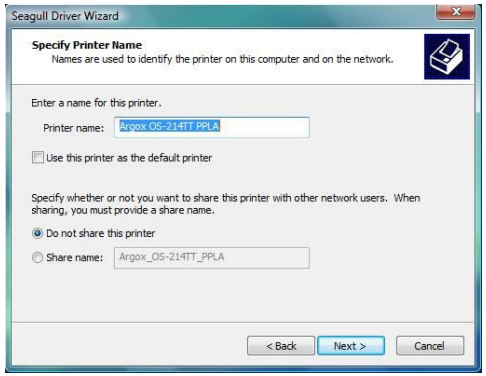
4. Select a driver for your printer and click "Next" .



5. Select the port of the printer and click "Next.

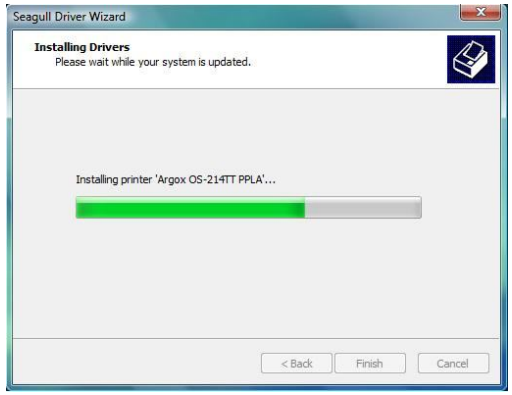

Seagull Driver Wizard
Specify Port
A port is used to connect a printer to the computer.
Specify the port that you are using. If you are connecting using TCP/IP or another port type not listed below, create a new port.
Port
Type
LPT1: Parallel Port
COM1: Serial Port (9600:8N1)
FILE: Local Port
USB001 Virtual printer port for USB
SHRFAX: Fax Monitor Port
XPSPort: Local Port
Create Port...
Configure Port...
< Back
Next >
Cancel

6. Enter a specify Printer Name and click “Nex”


Seagull Driver Wizard
Specify Printer Name
Names are used to identify the printer on this computer and on the network.
Enter a name for this printer.
Printer name:
Argox OS-214TT PPLA
Use this printer as the default printer
Specify whether or not you want to share this printer with other network users. When sharing, you must provide a share name.
Do not share this printer
Share name:
Argox_OS-214TT_PPLA
< Back
Next >
Cancel

7. Click “Finish”

8. After the related files have been copied to your system, click “Finish”



9. After the installation is complete, click “Close”

Notes:

1. If you are updating the driver, make sure you remove the previous version first.

2. If you install new bar code application software such as ArgoBar, LabelView or CodeSoft, you should activate the Label Dr. 200 (or Label Dr. 300) driver and set it as the current printer driver.

3. If you install new bar code application software such as Bartender Ultra Lite, you should activate the seagull driver for Argox printers.

Setting Parameters

After installing the driver, follow the path below to set parameters:

Windows 98/ 2000/ 2003:
Start → Settings→ Printers→ Label Dr.→ Properties

Windows XP:
Start → Settings → Printers and Faxes → Label Dr.
→ Properties

Windows Vista:
Start → Control Panel → Printers → Label Dr. → Properties

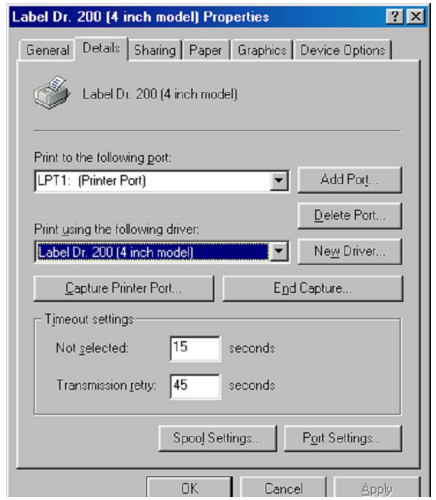
Parameters include:

Ports	Select the IO port to link with the printer. The port may be parallel (LPT), serial (COM), network port, or file.
Paper size	Select the proper size. If there is no desired size, select "Custom" to define paper size.
Orientation	Set portrait or landscape.
Paper source (Media type)	T/T stands for thermal transfer (ribbon) mode and D/T for direct thermal mode (without ribbon).
Media choice (Darkness)	Set the heat value or darkness from this field. Darkness values range from 0 to 15.
Copies	This function designates the number of printed copies of each page.
More options (Accessories)	To use the cutter or peeler function, enter More Options and select one of the items.
Device options (Speed)	Set print speed. For OS-214 and OS-214Zip, speed ranges from 1~ 3 ips; for OS-314/204, speed ranges from 1~ 2 ips; for OS-203 speed ranges from 1~ 3.5 ips.

Parameters for Win 98

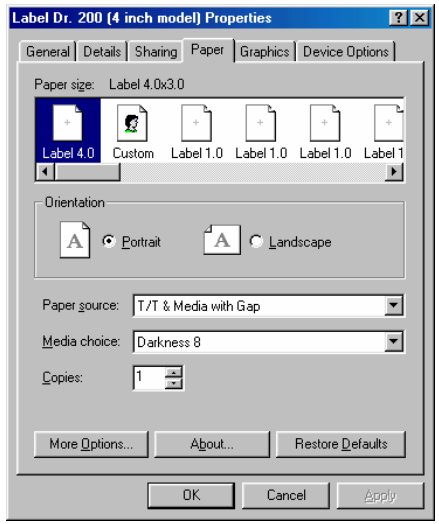
Ports

In the Properties menu:
→ Click "Details"
→ Select the IO port.
→ Click "OK"



Paper size
Orientation
Paper source
(Media type)
Media choice
(Darkness)
Copies

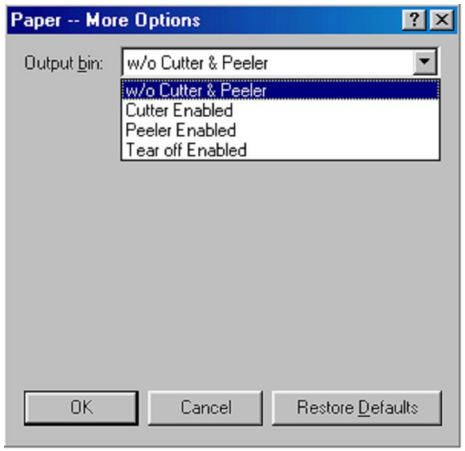
In the Properties menu:
→Click "Paper"
→Click items to select the desired parameters
→Click "OK"



Output bin

(Accessory setting)

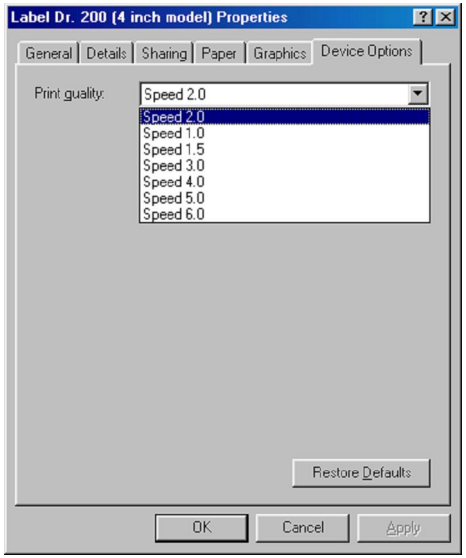
In the Properties menu:
→ Click "Paper"
→ Click "More Options"
→ Select Enable w/o cutter, peeler
→ Click "OK"



Print quality

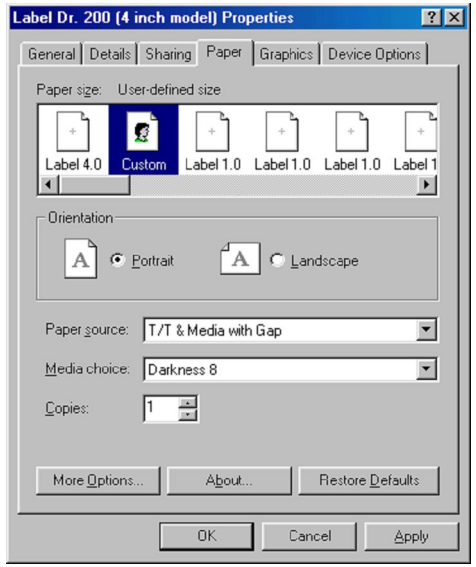
(Speed)

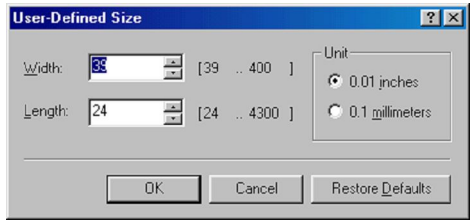
In the Properties menu:
→ Click "Device Options"
→ Select parameters
→ Click "OK"



Create a custom size

In the Properties menu:
→ Click "Paper"
→ Select "Custom"
→ User-Defined Size
→ Set a custom size
→ Click "OK"

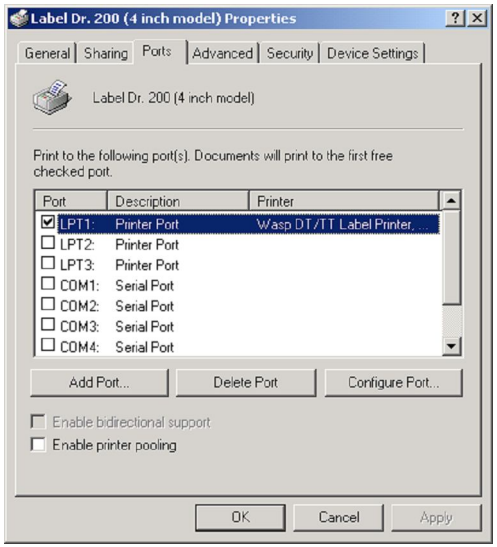




Parameters for Win 2000

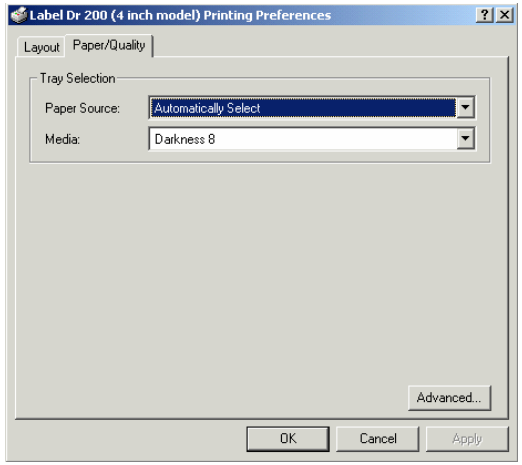
Ports

In the Properties menu:
→ Click "Ports"
→ Select the IO port
→ Click "OK"



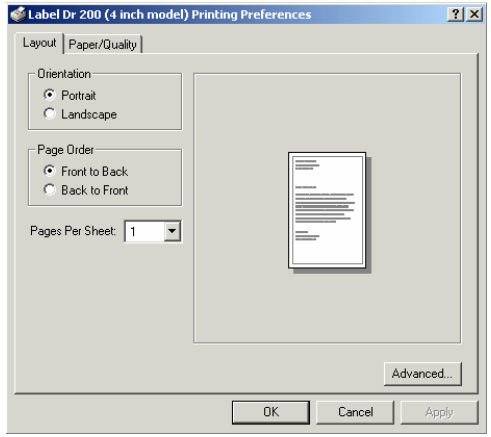
Paper source
(Media type)

In the Printers menu:
→ Right click
→ Select "Printing Preferences"
→ Click "Paper/Quality" and select media type
→ Click "OK"



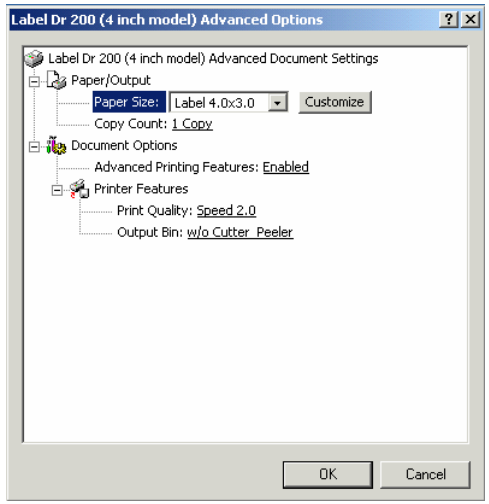
Orientation
Page order

In Printing Preferences:
→ Click "Layout"
→ Select "Portrait" or "Landscape"
→ Click "Page order”"
→ Select "Front to Back" or "Back to Front"
→ Click "OK"



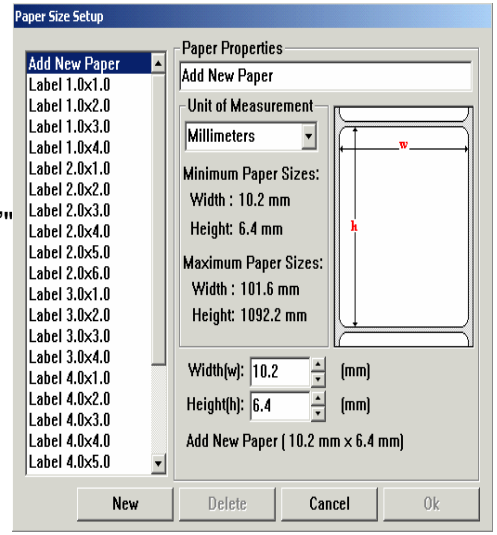
Paper size
Copies
Print quality
(Speed)
Output bin
(Accessory setting)

In Printing Preferences:
→ Click "Layout"
→ Click "Advanced"
→ Click each item to select parameters
→ Click "OK"



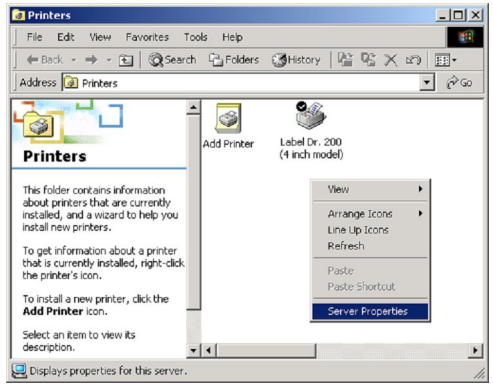
Paper size setup

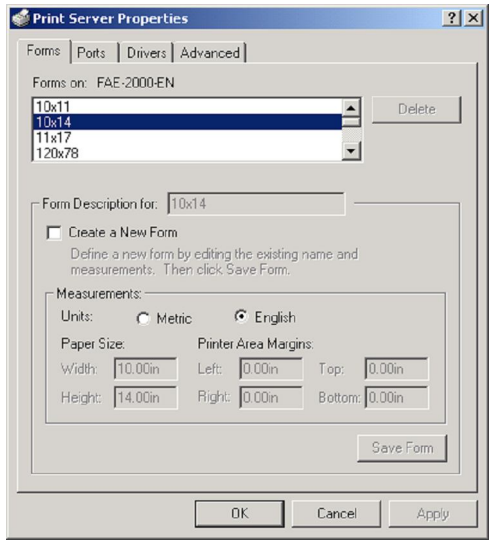
In Printing Preferences:
→ Click tag "Layout"
→ Click button "Advanced"
→ Click "button Customize”"
→ Select "paper size" or add new paper size.
→ Click "OK"



Create a custom size

In the Printers menu:
→ Right click
→ Select "Server Properties"
→ Enter a form name for in "Form Description for"
→ Reset paper size in "Measurements"
→ Click "OK"

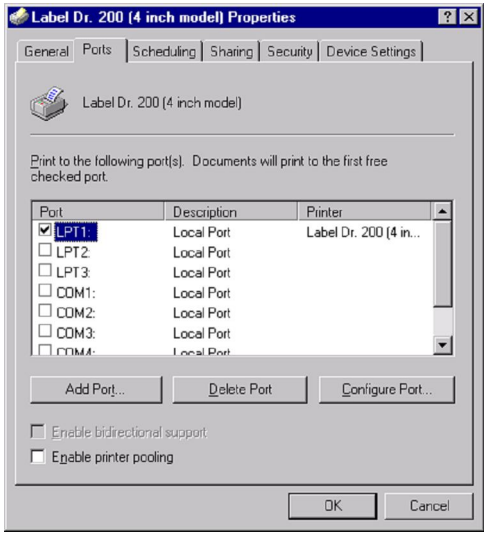

Printers
File Edit View Favorites Tools Help
Back Search Folders History
Address Printers
Go
Printers
This folder contains information about printers that are currently installed, and a wizard to help you install new printers.
To get information about a printer that is currently installed, right-click the printer's icon.
To install a new printer, click the Add Printer icon.
Select an item to view its description.
Add Printer
Label Dr. 200 (4 inch model)
View
Arrange Icons
Line Up Icons
Refresh
Paste
Paste Shortcut
Server Properties
Displays properties for this server.



For NT 4.0

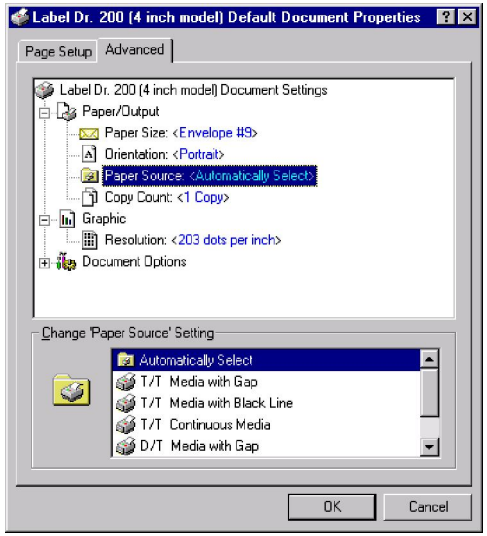
Ports

In the Properties menu:
→ Click "Ports"
→ Select IO port
→ Click "OK"



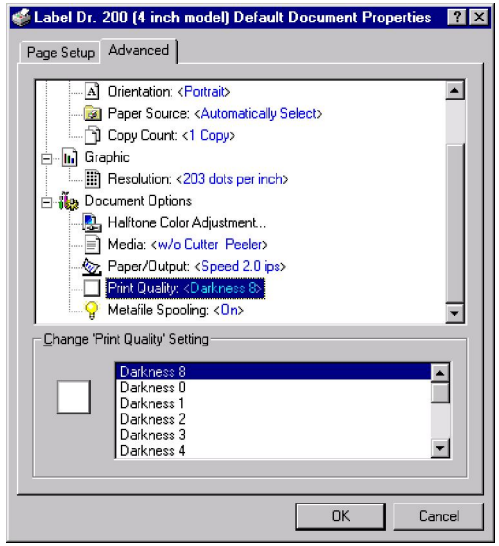
Paper size
Orientation
Paper source
(Media type)
Copies
Media choice
(Accessory setting)

In the Printer's menu:
→ Right click
→ Select "Document Defaults"
→ Click "Advanced"
→ Click items to select desired parameters



Paper/Output
(Speed)
Print quality
(Darkness)

In Default Document:
→ Click "Advanced"
→ Click item to select desired parameters
→ Click "OK"



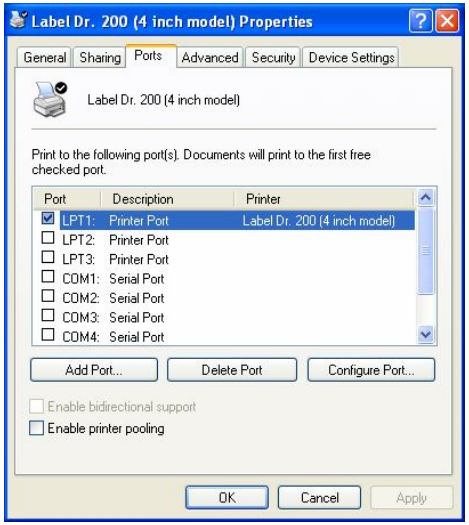
Create a custom size

Please refer to **Create a custom size** in Win 2000 above.

For Win XP

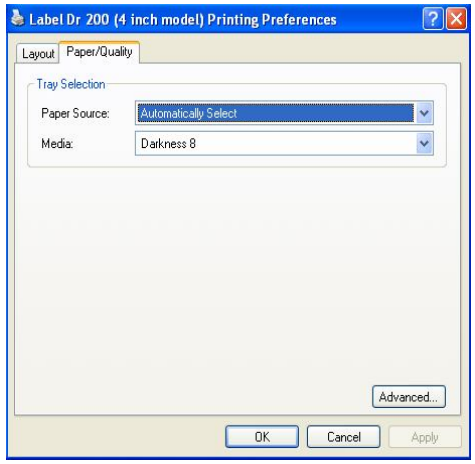
Ports

In the Properties menu:
→ Click "Ports"
→ Select the IO port
→ Click "OK"



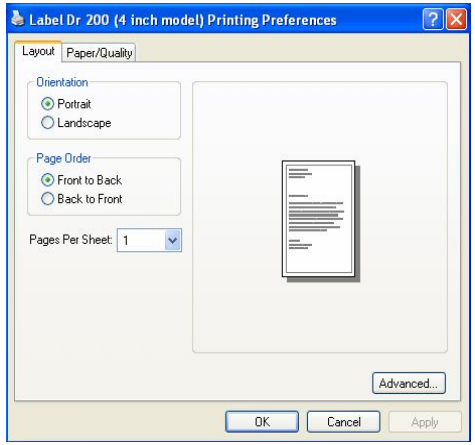
Paper source
(Media type)

In the Printers menu:
→ Label Dr
→ Right click
→ Select "Printing Preferences"
→ Click "Paper Quality"
→ Select media type
→ Click "OK"



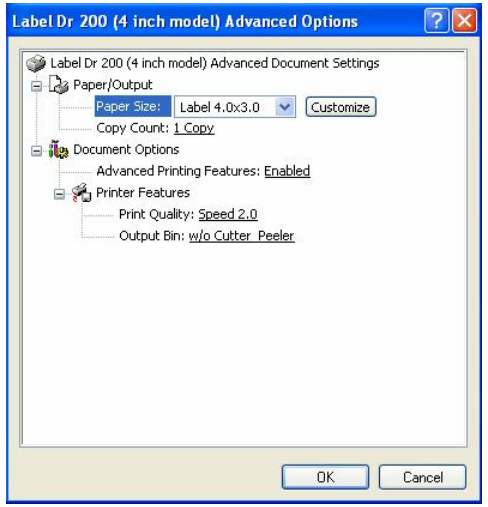
Orientation
Page order

In Printing Preferences:
→ Click "Layout"
→ Select "Portrait" or "Landscape"
→ Click "Page order""
→ Select "Front to Back" or "Back to Front"
→ Click "OK"



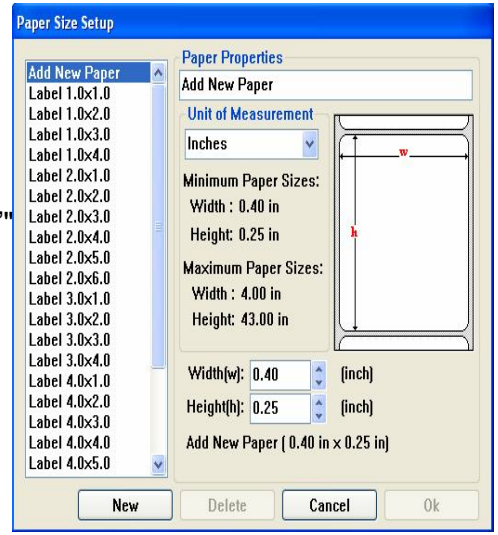
Paper size
Copies
Print quality
(Speed)
Output bin
(Accessory setting)

In Printing Preferences:
→ Click "Layout"
→ Click "Advanced"
→ Click items to select parameters
→ Click "OK"



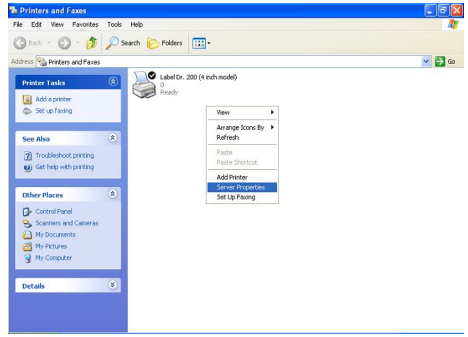
Paper size setup

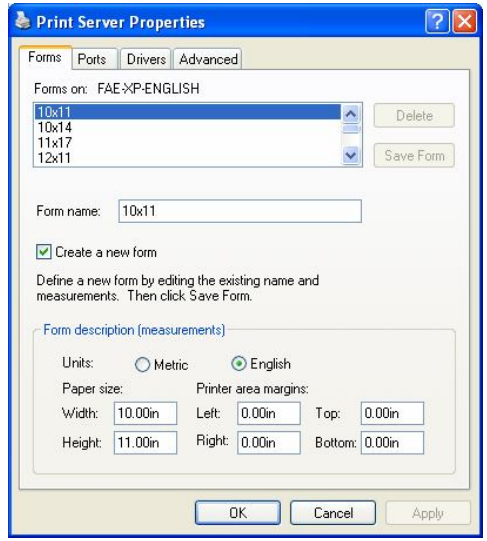
In Printing Preferences:
→ Click tag "Layout"
→ Click button "Advanced"
→ Click button "Customize"
→ Select "paper size" or add new paper size.
→ Click "OK"



Create a custom size

In the Printers menu:
→ Right click
→ Select "Server Properties"
→ Enter a “Form name”
→ Reset paper size in the "Form description"
→ Click "OK"

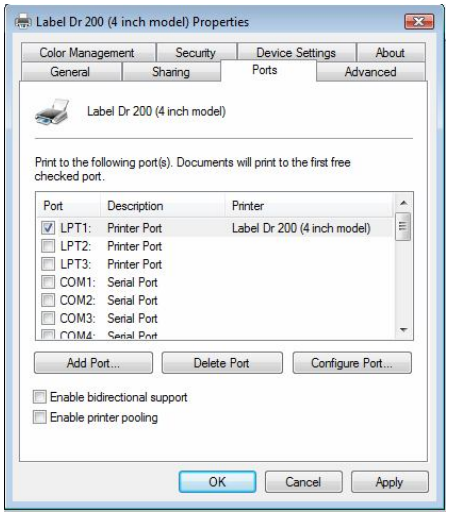




For Windows Vista

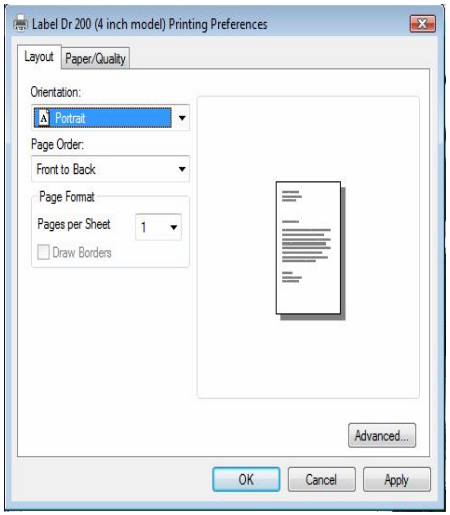
Ports

In the Properties menu
→ Click "Ports"
→ Select the IO port
→ Click "OK"



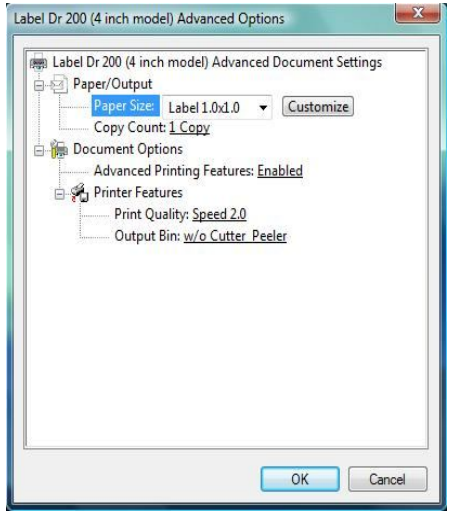
Orientation

In the Properties menu
→ Click" General"
→ Click" Printing Preferences" button
→ Click" Layout"
→ Select" Portrait" or " Landscape"
→ Click "OK"



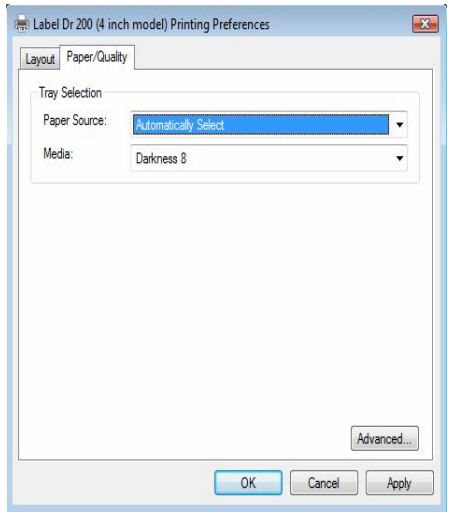
Paper Size
Copy Count
Print Quality
(Speed)
Output Bin
(Accessory setting)

Printinh Preferences menu
→Click" Layout"
→Click" Advanced" button
→Click each item to select the parameters
→Click "OK"



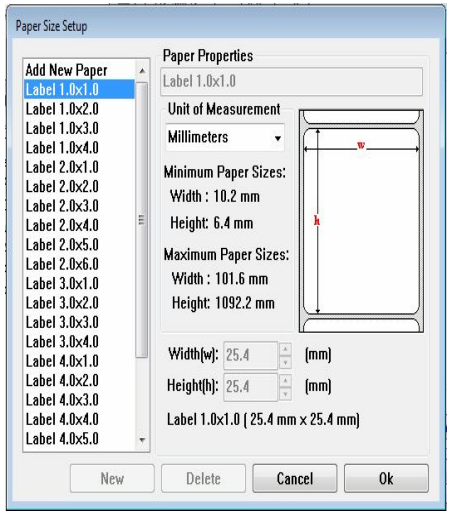
Paper Source
(Media type)
Media
(Darkness)

Printing Preferences menu
→Click" Paper/Quality
→Select media type
→Select Darkness
→Click" OK"



Paper Size Setup or Create a Custom Size

Printing Preferences menu
→Click” Advanced” button
→Click” Customize” button
→Select” Paper Size” or add new paper size
→Click” OK”



Troubleshooting

Normally, when the printer is in not working properly, the "Power" LED blinks continuously; while printing and communication between the host and printer stops.

LED Diagnosis

Power and Ready LEDs blinking continuously indicates printer errors. To understand the problem, please observe the Power and Ready LEDs and refer to the following solutions:

LED Indicators: Power and Ready LEDs blink at the same tempo

Power LED	**Ready LED**
ON	ON
OFF	OFF

Possible Problems	**Solutions**	**Remarks**
Miss-detect gap	Check the label path Check the label sensor	If you use a continuous label roll and run under Windows, select continuous media.
Label stock out	Supply the label roll	
Label stock not installed	Install the label roll	
Label jam	Recover the jam	

LED Indicators: Power and Ready LEDs blink alternately

Power LED	Ready LED
ON	OFF
OFF	ON

Possible Problems	Solutions	Remarks
Ribbon out	Supply the ribbon roll	Not applicable to direct thermal type.
Ribbon jam	Recover the jam	
Ribbon sensor error	Replace ribbon sensor	

Note: *For models OS-203/OS-204 this error will not occur.*

LED Indicators: Only the Power LED blinks

Power LED	Ready LED
ON	ON
OFF	ON

Possible Problems	Solutions	Remarks
Serial IO error	Check the baud rate	Not for Centronics
Memory full	Add the extension RAM	
Cutter failed, or jam at cutter	Check the cutter Recover the jam	Occurs only when installing or setting the cutter
Hardware error	Call for service	

LED Indicators: Only the Ready LED blinks

Power LED	Ready LED
ON	ON
ON	OFF

Possible Problems	Solutions	Remarks
Print head too hot	Printing will stop until the print head cools to an acceptable printing temperature. When it does, the printer will automatically resume operation.	
Printer is receiving data	Wait for the data transmission finished	

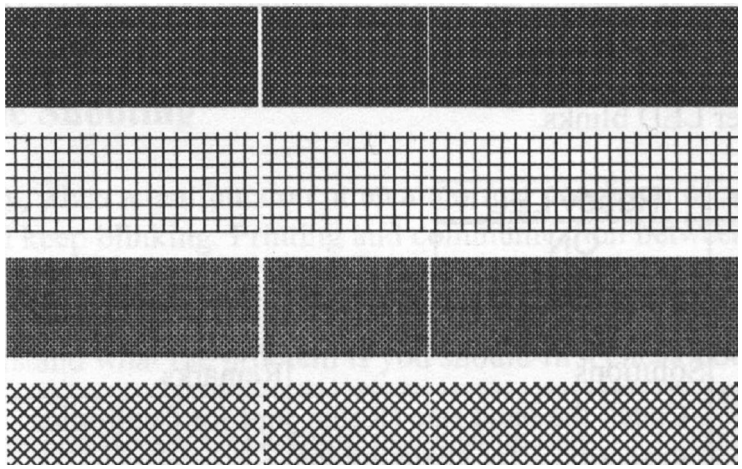
Miscellaneous

If the host shows "Printer Time out"

1. Check if the communication cable (parallel or serial) is connected securely to your parallel or serial port on the PC and to the connector on the printer at the other end.
2. Check if the printer power is turned on.

If the data has been sent, but there is no output from the printer. Check the active printer driver, and see if Label Dr. for your Windows system and the label printer has been selected.

Vertical streaks in the printout usually indicate a dirty or faulty print head. (Refer to the following examples.)



Clean the print head. If the problem persists, replace the print head.

Poor printout quality:

- The ribbon may not be qualified.
- The media may not be qualified.
- Adjust the Darkness (heat temperature).
- Slow down the print speed.
- Refer to the next chapter and clean the related spare parts.

Recovery

After correcting problems, simply press the panel button or restart the printer to continue your print jobs. Make sure the LEDs are not blinking and remember to resend your files.

Caring for Your Printer

After using eight rolls of label stock, clean the following areas of the printer.

Note: *Turn off the printer before cleaning.*

Cleaning

Clean the following components of the printer using a cotton bud dampened with alcohol. Do not soak the cotton bud excessively.

Thermal Print Head

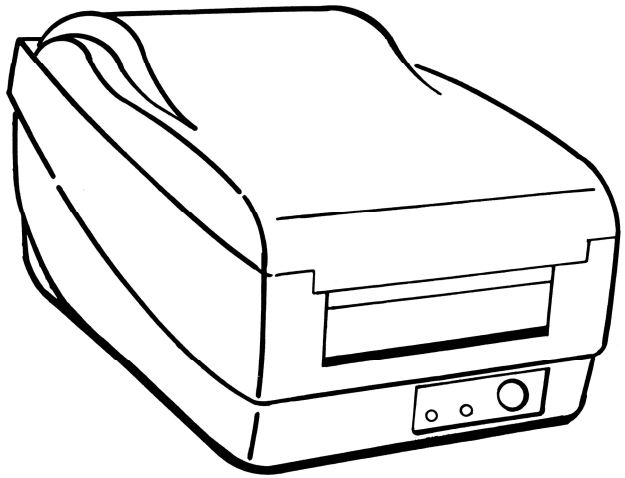
Thermal paper stock and the ribbon release debris on the print head, which degrades printing quality. Clean the print head with methanol or isopropyl alcohol and a cotton bud. Do not touch the heater element with your fingers. Debris or dirt on the roller should be cleaned with alcohol.

Paper Sensor

Debris or dirt on the paper sensor can cause a miss-read or unstable detection of the label gap. Clean with a cotton bud dampened with alcohol.

Replacing the Thermal Print Head

1. Switch off the power and wait for both LEDs to go off.
2. Unlatch the print head module.
3. Remove the ribbon.
4. Push the print head firmly into the casing and shift it to the left. It will release from the module.
5. Disconnect the print head cable.
6. Disassemble the print head and the mounting bracket by releasing screws.
7. Replace with a new print head. Reassemble the print head module in reverse order. Be careful not to touch the print head elements.



Technical Reference

General Specifications

Specification	Model OS-203	Model OS-204	Model OS-214	Model OS-214Zip	Model OS-314TT
Print method	Direct thermal		Direct thermal and Thermal transfer		
Resolution	203 DPI (8 dots/mm)				300 DPI (12 dots/mm)
Maximum print width	2.83 in. (72mm)	4.13in. (105 mm)		4.16in (106mm)	4.06 in. (103 mm)
Maximum print length	10 in. (254mm)	8 in. (203mm)		48 in. (1219mm)	14 in. (356mm)
Maximum print speed	3.5 inches (89 mm) per second	2 inches (51 mm) per second	3 inches (76 mm) per second		2 inches (51 mm) per second
Onboard DRAM	512 K bytes			2 M bytes	
Rotation	0, 90, 180 and 270, 4 direction rotations				
Media type	I. Direct thermal: paper visible light and infrared scan able labels, tag stock, butt cut or die cut, with various adhesives.				
	N/A		II. All above media, plus thermal transfer paper or vinyl labels and tags, butt cut or die cut, with various adhesives.		

Specification	Model OS-203	Model OS-204	Model OS-214	Model OS-214 Zip	Model OS-314TT
label roll diameter	Maximum 4.3 in.(109mm) outside diameter, 0.5 in. (12.7 mm) inside diameter (beside OS-203) Maximum 5 in. (127mm) outside diameter, 0.5 in. (12.7 mm) inside diameter(only OS-203)				
Label indexing	Black stripe and gap				
Ribbon types **Ribbon size**	N/A		Wax, Wax/Resin and Resin Ribbon width- 1”~4” Ribbon roll –max OD 1.45 “ (37 mm) Ribbon length – max 91m Core size – ID 0.5” core (13 mm) with notch		
Dimensions	W5.3 x D9.0 x H6.4 in.	W7.3 x D10.9 x H6.0 in			
Weight	1.2Kg (2.6lbs)	1.9 kg (4.2lbs)			2.1 kg (4.6 lbs)
Agency Listing	FCC class A	FCC class B			
	CE, cTUVus approved				
Power Source	Universal switching power supply Input:100V~240V, 1.5A, 47~63Hz Output: 24VDC, 2.92A, 70W Max				
Operating temperature	32°F ~ 104°F (0°C ~ 40°C)				
Storage temperature	-4°F ~ 122°F (-20°C ~ 50°C)				
Humidity	10~90% RH				

Optional Accessories	• Serial (RS232) cable • External media stacker (for media roll with max. 8-inch OD) • Dispenser Kit • Cutter • 2MB Flash memory card • Font card (OS-214Zip – Traditional Chinese or Simplified Chinese or Korean only) • RTC card (with 1MB Flash board) (OS-214Zip does not support RTC card) • Parallel to USB adapter • Standalone KDU-ArgoKee

Fonts, Bar Codes and Graphics Specification

The specifications of fonts, bar codes and graphics depends on printer emulation, which is a printer programming language (PPL) through which the host communicates with your printer. There are two PPLs for models OS-203/204/214/314. The factory default is PPLA, and you can also update firmware to PPLB.

Note: *Improper firmware updating may crash printer firmware. Please contact your supplier for assistance.*

Printer Programming Language A, PPLA

Specification	**Model OS-203DT**	**Model OS-204DT**	**Model OS-214TT**	**Model OS-314TT**
General fonts	7 alpha-numeric fonts, OCR A and OCR B ASD			
Smooth fonts	4, 6, 8, 10, 12, 14 and 18 points			
Symbol sets for fonts smooth	USASCII, UK, German, French, Italian, Spanish, Swedish, and Danish/Norwegian			
Courier fonts	8 symbol set (PC, PC-A, PC-B EAMA-94, Roman8, Legal, Greek and Russian)			N/A
Soft fonts	Downloadable PCL fonts			
Font expandability	1x1 to 24x24			
One-Dimension barcode	Code39, Code93, Code128/subset A, B and C, Codabar, Interleave 2 of 5, UPC A/E/2 and 5 add-on, EAN 13/8, UCC/EAN-128, UCC/EAN 128 random weight, Postnet, Plessey, HIBC, Telepen, FIM.			
Two-Dimension barcode	MaxiCode , PDF417 and Datamatrix			
Graphics	PCX, BMP, IMG and HEX formats			

Printer Programming Language B, PPLB

Specification	**Model OS-203DT**	**Model OS-204DT**	**Model OS-214TT**	**Model OS-314TT**
General fonts	5 fonts with different point sizes			
Symbol sets (Code pages)	For 203dpi & 300dpi models: 8 bits: code page 437, 850, 852, 860, 863 and 865. 7 bits: USA, British, German, French, Danish, Italian, Spanish, Swedish and Swiss. For 203dpi model only: 8 bits: code page 857, 861,862, 855, 866, 737, 851, 869, 1252, 1250, 1251, 1253, 1254 and 1255			
Soft fonts	Downloadable soft fonts			
Font expandability	1x1 to 24x24			
One-Dimension barcode	Code39, Code93, Code128/subset A, B and C, Codabar, Interleave 2 of 5, UPC A/E/2 and 5 add-on, EAN 13/8, UCC/EAN-128, Postnet, Matrix 2 of 5, Code-128UCC.			
Two-Dimension barcode	MaxiCode and PDF417			
Graphics	PCX and binary raster			

Notes:

1. *The bare core for the ribbon must be 11 cm in length. It should have two opposite slits at two ends. If the ribbon itself is less than 11 cm, it must be aligned with the bare core at the left end when you install it.*
2. *Since this printer uses band buffer technology. If you just print texts or barcodes the maximum length is more than 30 inches. If you print many graphics the maximum length can only be a few inches with standard onboard RAM. (Extension RAM, font*

board and flash modules use the same connector and cannot function at the same time.)

Printer Programming Language Z, PPLZ (OS-214Zip)

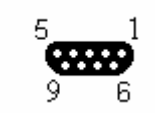
Specification	Model OS-214Zip
General fonts	10 resident fonts (9 bitmapped fonts and 1 scalable font)
International character sets	14 international character sets: USA, USA2, UK, Holland, Den / Nor, Swe / Fin, German, France1, France2, Italy, Spain, Misc., Japan, page 850.
Soft fonts	Downloadable soft fonts
Bitmapped Font expandability	1x1 to 24x24
One-Dimension barcode	Code11, Interleave 2 of 5, Code39, Code93, EAN 13/8, UPCA/E, Code128/subset A, B and C, Industrial 2 of 5, Standard 2 of 5, Codabar, UPC/EAN Extensions, MSI, Plessey, Postnet.
Two-Dimension barcode	PDF-417, MaxiCode, Data Matrix (ECC200 only) and QR Code.
Graphics	HEX and binary graphics with normal as well as compressed images

Interface Specifications

Serial

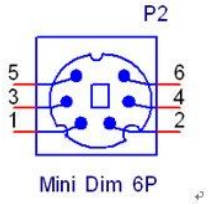
For the OS-204/214/214Zip/314, the RS232 connector on the printer side is a female, DB-9.

Pin	Direction	Definition
1	In	DSR
2	In	RxData
3	Out	TxData
5	-	Ground
6	Out	DTR
7	Out	RTS
8	In	CTS
9	Out	+5V



For the OS-203, the RS232 connector is a Mini Dim 6P.

Pin	Direction	Definition
1	Out	+5V
2	-	Ground
3	Out	RTS
4	In	CTS
5	In	RxData
6	Out	TxData



Note: *Pin 9 on the OS-204/214/314 and pin 1 on the OS-203 are reserved for a KDU (keyboard device unit). Do not connect these pins if you are using a general host such as a PC.*

Connection with host:

Host 25S (PC or compatible)		**Printer 9P**	**Host 9S** (PC or compatible)		**Printer 9P**
DTR 20	……	1 DSR	DTR 4	……	1 DSR
DSR 6	……	6 DTR	DSR 6	……	6 DTR
TX 2	……	2 RX	TX 3	……	2 RX
RX 3	……	3 TX	RX 2	……	3 TX
CTS 5	……	7 RTS	CTS 8	……	7 RTS
RTS 4	……	8 CTR	RTS 7	……	8 CTS
GND 7	……	5 GND	GND 5	……	5 GND

Alternatively you can connect the 3 wires as follows:

Host 25S (PC or compatible)		**Printer 9P**	**Host 9S** (PC or compatible)		**Printer 9P**
TX 2	……	2 RX	TX 3	……	2 RX
RX 3	……	3 TX	RX 2	……	3 TX
GND 7	……	5 GND	GND 5	……	5 GND
pin 4			pin 4		
pin 5			pin 6		
pin 6			pin 7		
pin 20			pin 8		

The simplest way to connect to other hosts (not PC compatible) or terminals is:

Printer		**Terminal/Host**
Pin 2- RxData	……	TxData
Pin 3- TxData	……	RxData
Pin 5- Ground	……	Ground

In general, as long as the data quantity is not too large and you use Xon/Xoff as flow control, it will be problem free.

Baud rate: 2400, 4800, 9600, 19200 and 38400. (Programmable by command)

Data format: always 8 data bits, 1 start bit and 1 stop bit.

Parity: always non parity

Handshaking: XON/XOFF as well as CTS/RTS (hardware flow control).

If you run an application with the bundled printer driver under Windows and use the serial port, you should check the above parameters and set the flow control to "Xon/Xoff "or "hardware".

Parallel (Centronics)

The parallel port is a standard 36-pin Centronics. Pin assignments are as follows:

Pin	Direction	Definition	Pin	Direction	Definition
1	In	/STROBE	**13**	Out	SELECT
2	In	Data1	**14,15**		NC
3	In	Data 2	**16**	-	Ground
4	In	Data3	**17**	-	Ground
5	In	Data4	**18NC**		
6	In	Data5	**19~30**	-	Ground
7	In	Data6	**31**		NC
8	In	Data7	**32**	Out	/Fault
9	In	Data8	**33~36**	-	NC
10	Out	/ACK			
11t	Out	BUSY			
12	Out	PE			

Auto Polling

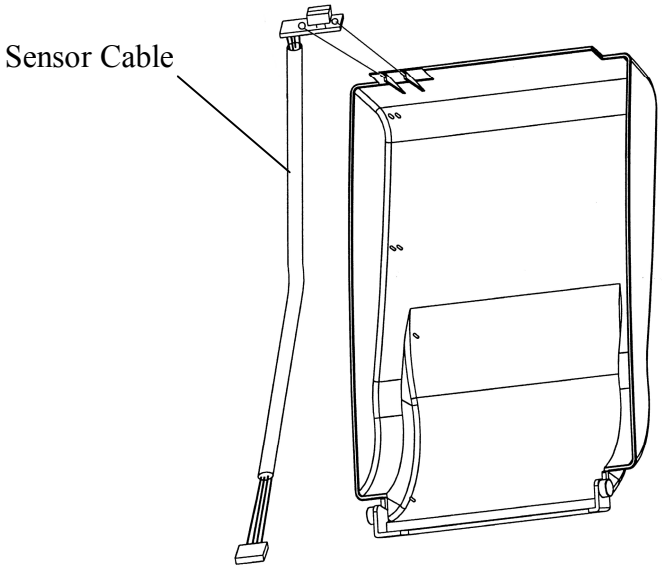
Both the serial port and parallel port of this printer can be activated at the same time, i.e the printer can simultaneously communicate with two PCs via different ports. However as no port contention is made for this printer, if both PCs transmit data at the same time the data may become damaged in the receiving buffer.

Appendix I - Installing Dispenser Kit

1. Turn off the printer power and unplug the printer.
2. Unwrap the dispenser kit and take out screws, the shaft, the plastic roller, the dispenser bar, the direction label, and the peeler sensor cable.

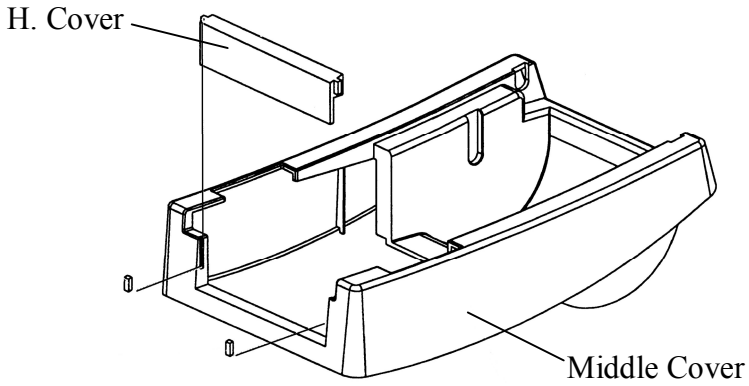
Top Cover

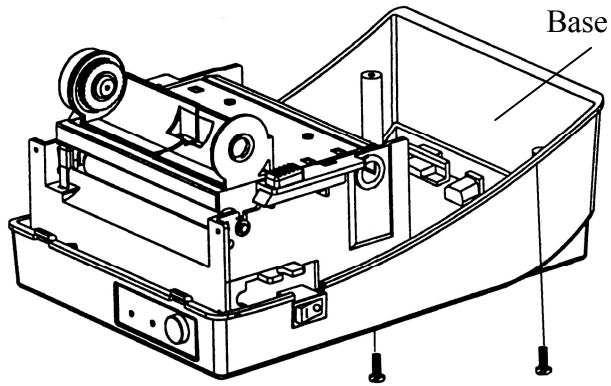
3. Take off the top cover of the printer.
4. The peeler sensor cable has a sensor board at one end and a connector at the other end.
5. Mount the two little holes of the sensor board on the two spines at left upper corner inside the top cover, keeping the cable at the left.
6. Route the peeler sensor cable through the guides along the left side of the top cover.
7. Fix the sensor cable and sensor board with Loctite-444 instant adhesive or equivalent.



Middle Cover

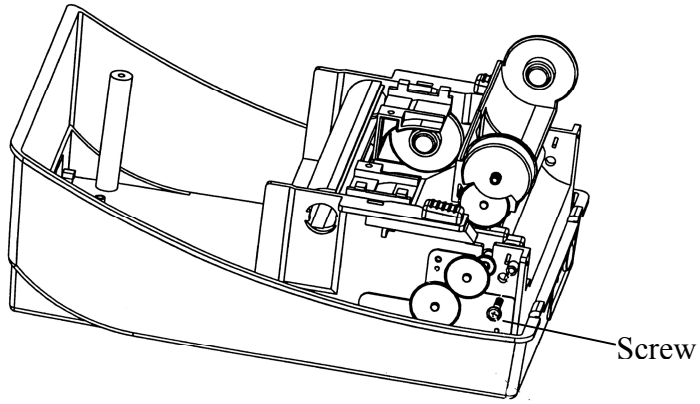
8. Remove the middle cover.
9. Take off the H. Cover.
10. Tape the direction label on the top of the H. cover with the arrow sign heading opposite you.



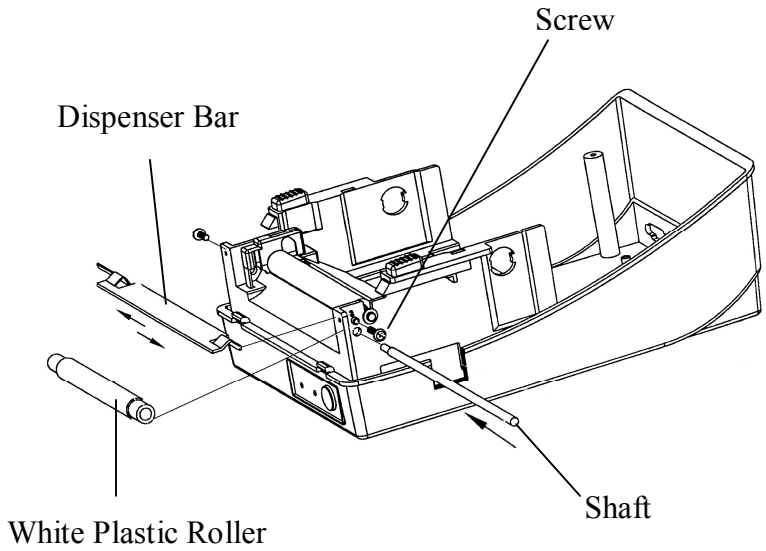


Base Housing

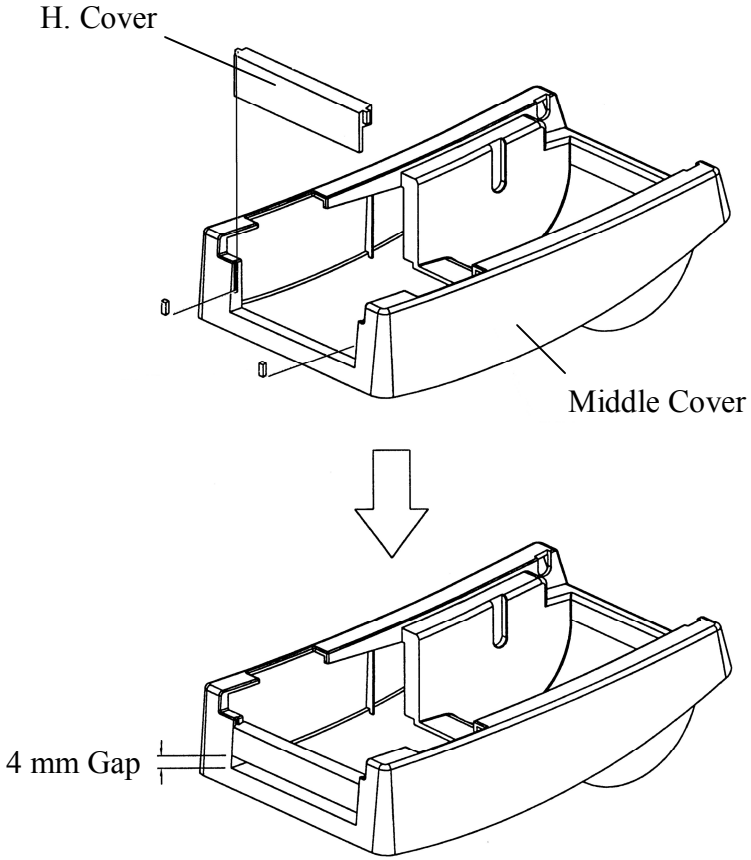
11. Release the screw on the left bracket of the chassis.



12. Unlatch the print head module. Hook the white roller on the brackets of the chassis, ensuring the long thinner end is on the left side.
13. Guide the shaft through the respective holes on the left bracket, the white roller and then the right bracket in order. (To smooth this procedure, hold the white roller with one hand.)
14. Secure the attached screw to the right bracket of the chassis to fix the shaft.
15. Hook the dispenser bar on the brackets of the chassis, positioning it above the white roller. Ensure that the dispenser bar is parallel with the black platen roller and its long thinner end is on the left.
16. Guide the sensor cable connector through the hole on the upper left corner of the middle cover.

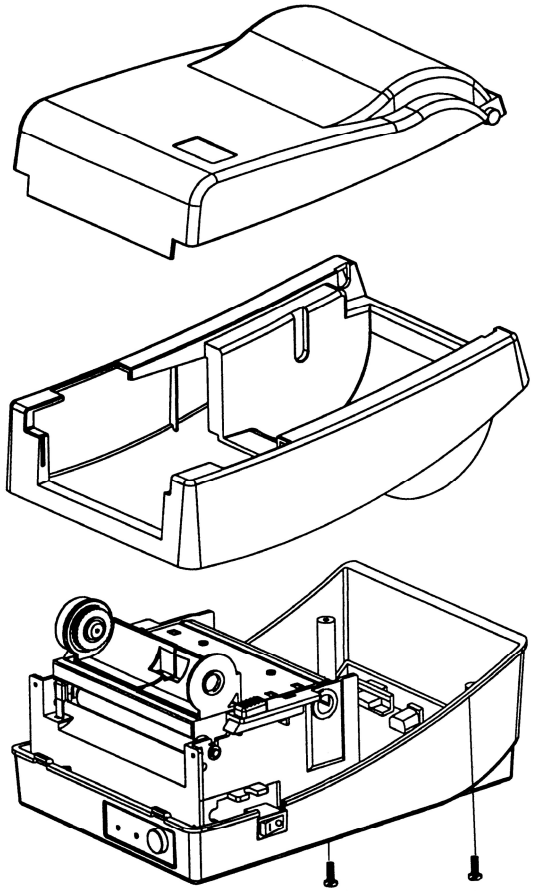


17. Click the top cover back onto the middle cover.
18. Insert the sensor connector into its receptacle on the main logic board of the base housing.
19. Use screw to install the sensor to the front-left side of the top cover. The sensor cable should be along in the left side of the top cover.
20. Click the middle cover back into the base housing. First click in the front then the rear.
21. Secure the two screws at the bottom of the base housing.

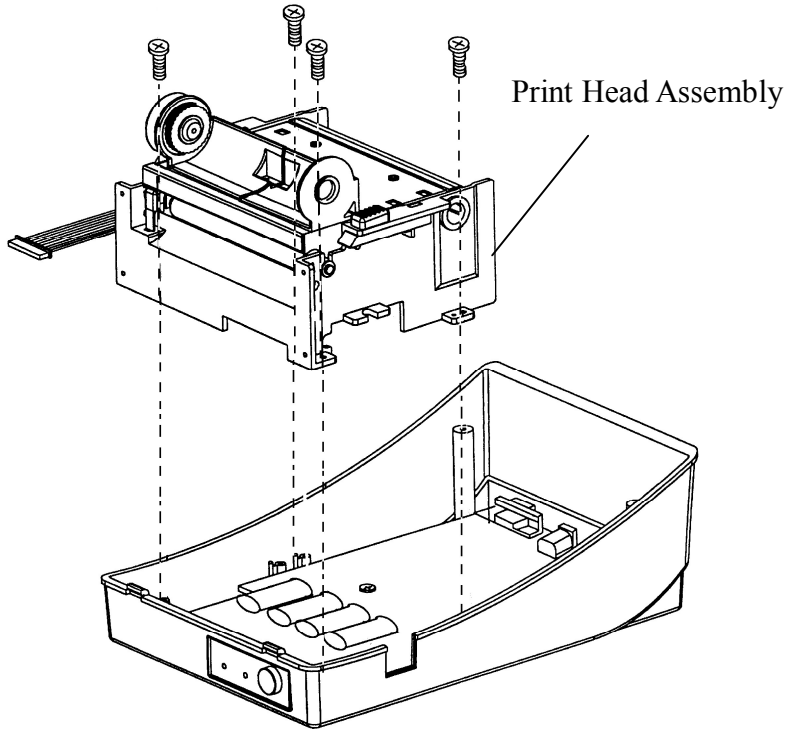


Appendix II - Installing the Cutter

1. Turn off the printer power and unplug the power cable and Centronics / Serial cable.
2. Remove the top cover.
3. Remove the two screws under the base housing.

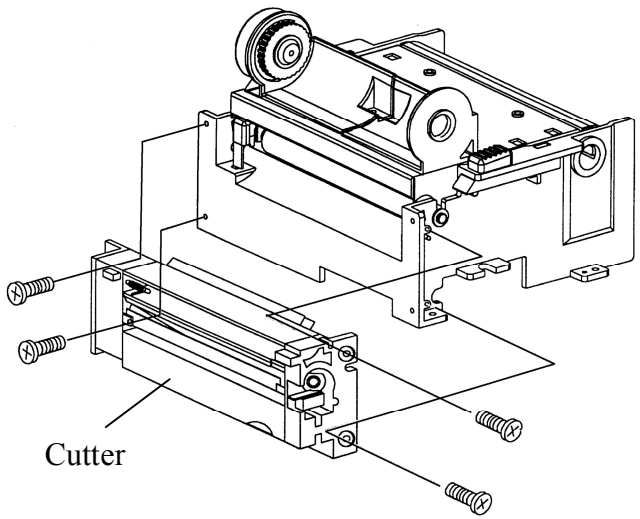


4. Remove the whole print head assembly by releasing the 4 screws at its feet.



5. a. Mount the cutter IC (3717) to U19 on the main board (OS-204/214).
   b. Mount the cutter baby board to JP29 on the main board (OS-214ZIP).
   c. Mount the cutter baby board to JP17 on the main board (OS-203).
   d. Mount the cutter baby board to JP29 on the main board (OS-314).

6. Secure the four screws attaching the cutter.



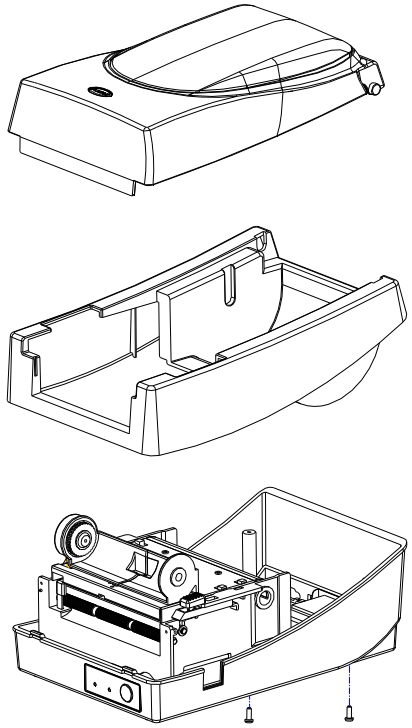
7. Plug the cutter's connector into the PCB's header connector (JP13).
8. Reattach the print head assembly by securing the 4 screws.
9. Click back the middle cover.
10. Secure the two screws for the base housing.
11. Click the top cover into place.

Appendix III - Installing the Extension Card

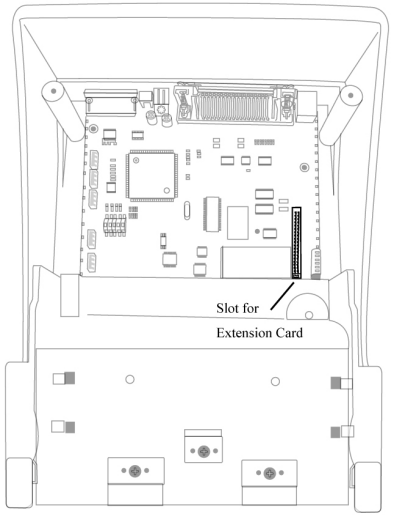
Extension Card designated for all optional extension modules. For example, RTC, Font card and specified function card.

Install the extension card into the printer as follows:

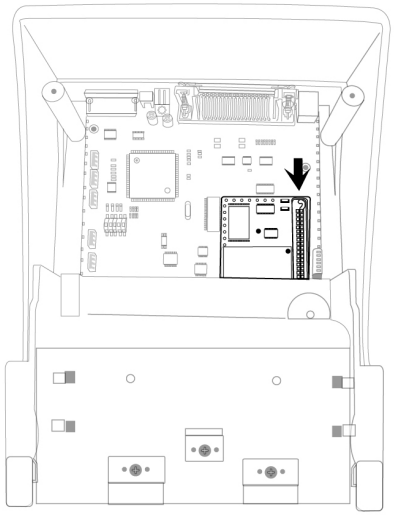
1. Turn off the printer power.
2. Remove the top cover.
3. Release the two screws at the bottom of the base housing.



4. Remove the middle cover.



5. Mount the extension card to J14 on the main board.



6. Click back the middle cover.
7. Secure the two screws for the base housing.
8. Click the top cover into place.